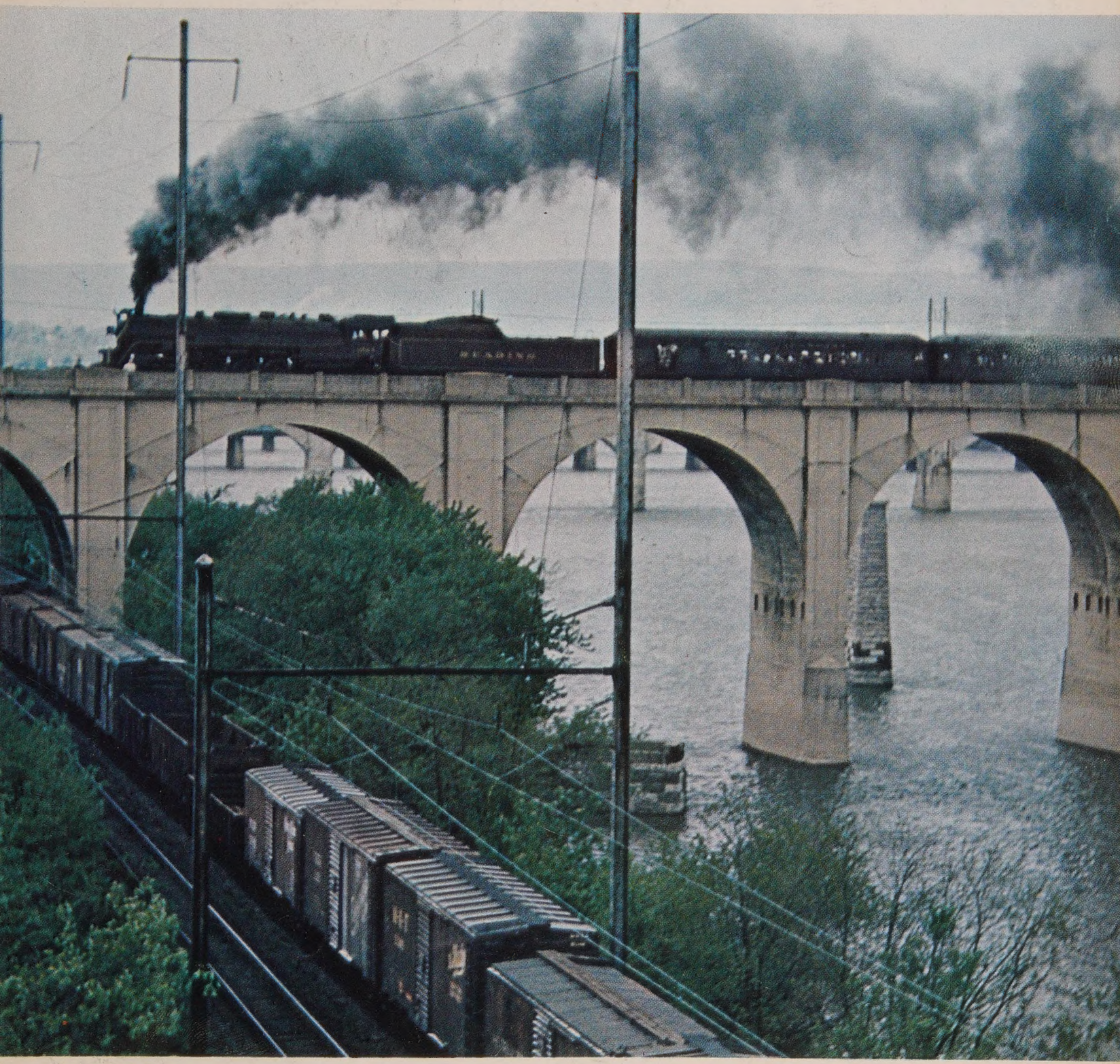
RAILROAD

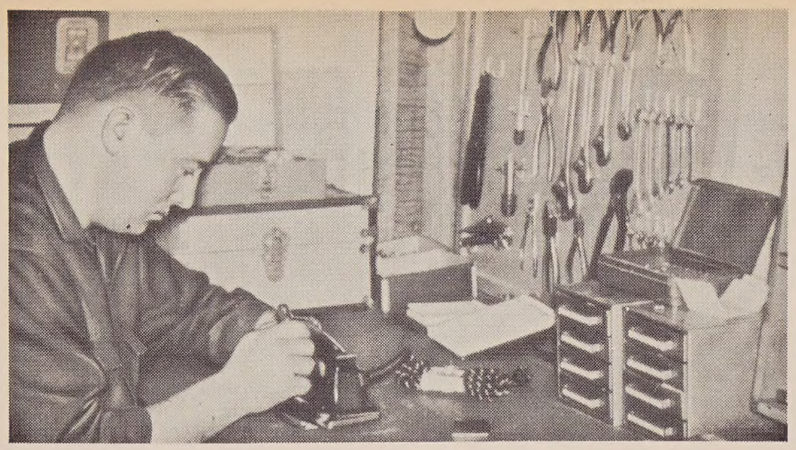
MARCH, 1965

MAGAZINE

50¢



Adventurous Railroading and Rail Hobbies



Has shop in basement—gets "more and more work all along"

"I HAD PRACTICALLY no knowledge of any kind of repair work. One day I saw the ad of NRI in a magazine and thought it would be a good way to make money in my spare time. Now I am busy almost all my spare time and my day off—and have more and more repair work coming in all along. I have my shop in the basement of my home."

—JOHN D. PETTIS,
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- ☐ **ENJOY SEMI-RETIREMENT ON A GOOD INCOME.** When you're ready to retire, you can devote a few hours a day to this work. Live and work anywhere you please.
- ☐ **NO PREVIOUS EXPERIENCE OR TRAINING NEEDED.** We tell you and show you everything you need to know, in plain English and clear pictures.

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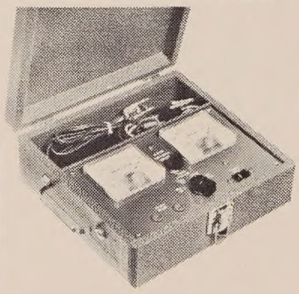

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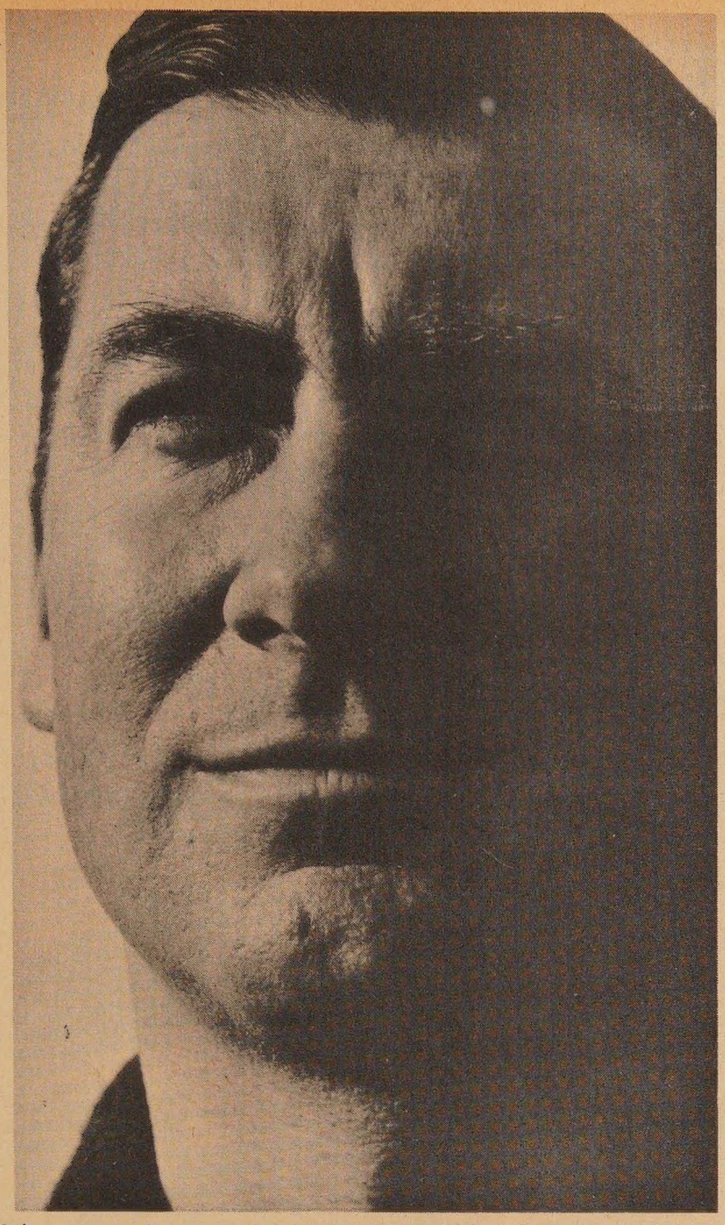

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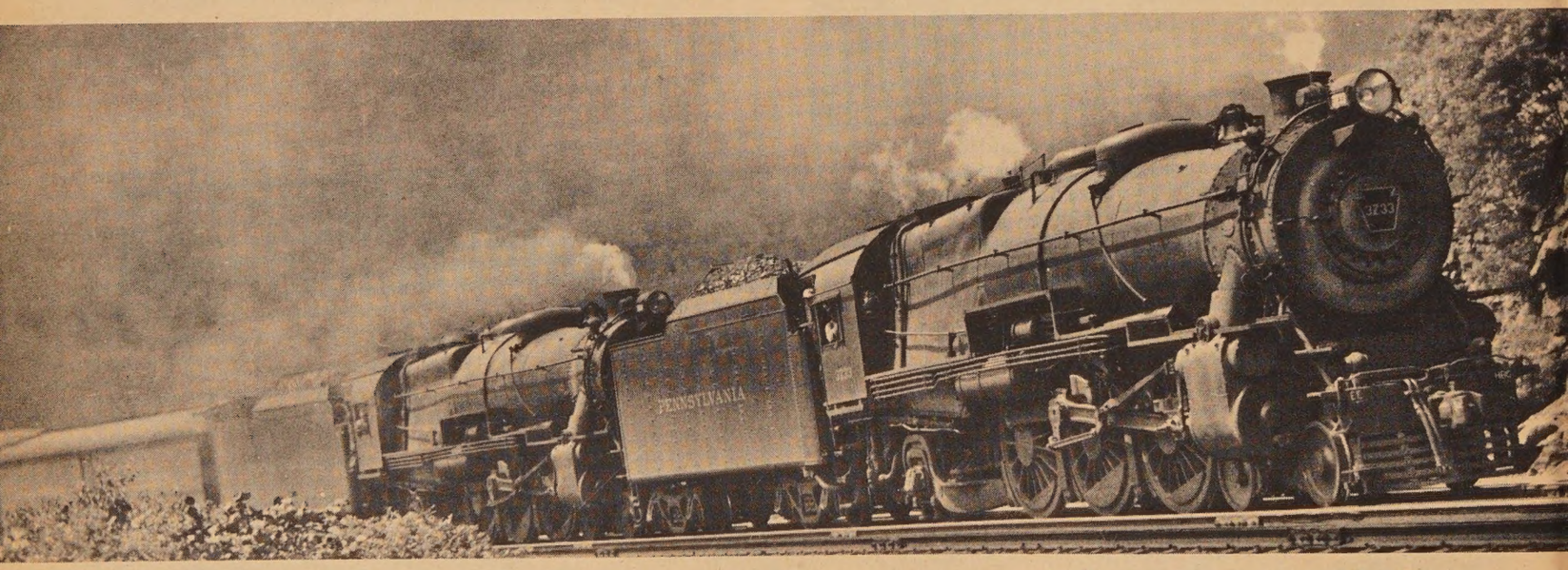
H. W. Pontin, Rail Photo Service, Boston, Mass.



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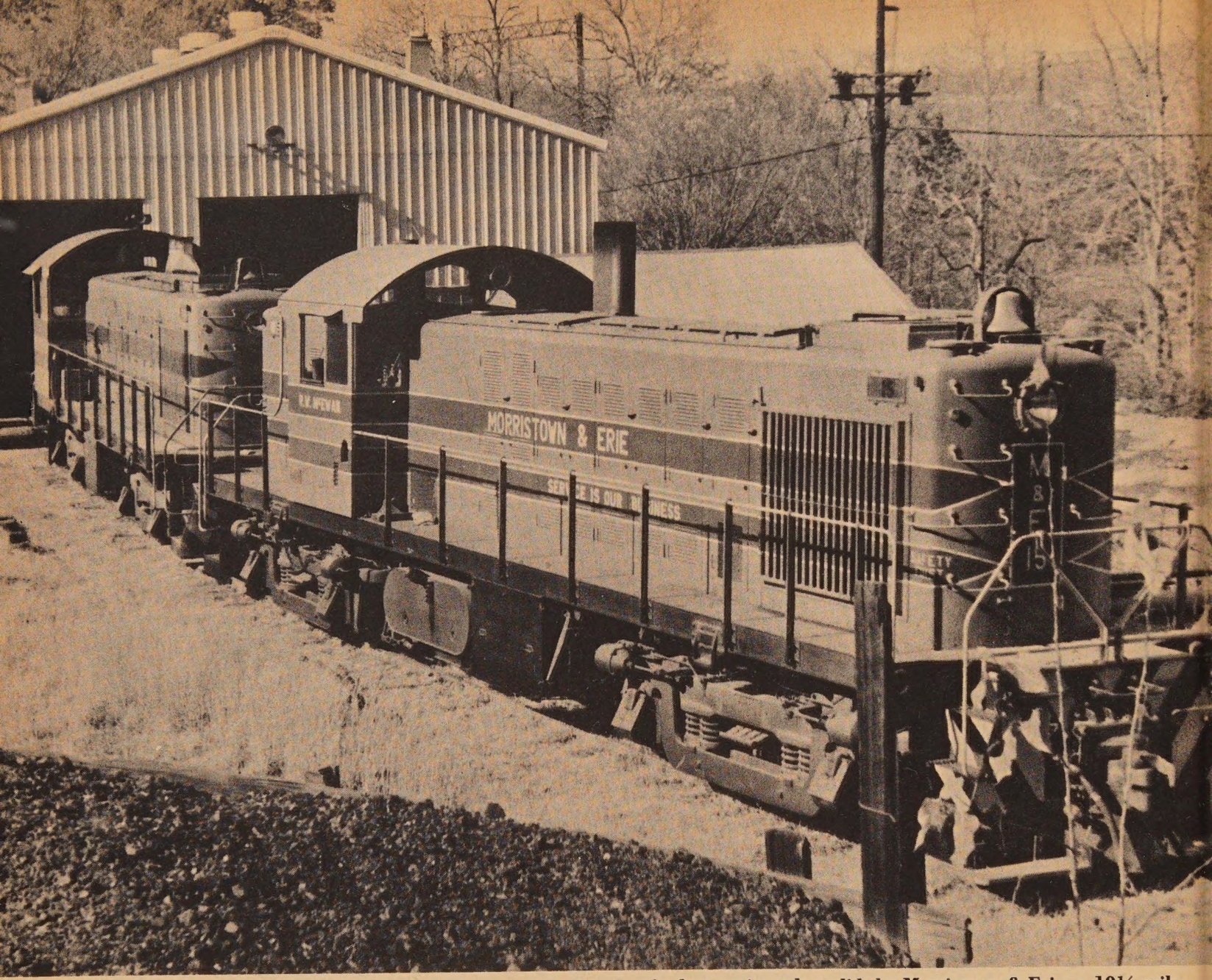

Seldom does a railroad letter its president's name on the side of a locomotive cab as did the Morristown & Erie, a 10½-mile New Jersey freight line. Engine in front is No. 15, the *R. W. McEwan*; the other one is No. 14, the *Mauritus Jensen*.
Robert A. Pennisi (E-L agent-opr.), 15 Curtis St., Dover, N.J.

THE MAIL CAR

where editors and readers meet

PERSONALITIES. Color-shot on this month's front cover, showing a Reading train at Harrisburg, Pa., was made by Miss Bronette Ehrlich, Washington, D.C., who was No. 26 in our series of *Interesting Railfans*.

Fred Westing of 4102 Vernon Rd., Drexel Hill, Pa., who wrote our article on Pennsy Pacifics (page 21), works in the library of Franklin Institute, Philadelphia, and is the author of a recent book entitled *Apex of the Atlantics*.

Doug Ogden, conductor on a Missouri Pacific local, collected over $75 from train crews which was spent on Yuletide gifts for three little girls who live in a trackside shack near Leroy, Kansas, reports Walt Evans of Topeka. The girls' father left home some time ago and the family is poor.

Jack Emerick, 84 Parkview Terrace, Lincroft, N.J., who made the Reading color-shot used on our Feb. '61 front cover, is now an assistant trainmaster on the Jersey Central and New York & Long Beach railroads.

James Liston, conservation officer of Lee County, Ill., charged a freight conductor on the Burlington with having shot wild pheasants from his caboose near Amboy, Ill., without a hunting license. Liston said he found the birds in the caboose after stopping the train.

The recent retirement of Aaron Ferguson, 1808 E. High St., Springfield, Ohio, after 42 years of railroading, broke up one of the dozen or so father-son combinations in engine service on the Detroit, Toledo & Ironton. His son, Woodward, is also an engineer.

Patrick B. McGinnis, former president of the Boston & Maine, and three present officials pleaded innocent in Federal Court at Boston, Mass., recently to a charge of diverting $320,000 of railroad funds to their own use. Judge Sweeney set bail at $1,000 each. Arraigned with McGinnis were Daniel A. Benson, president; George Glacy, vice president, and Maurice A. Travserse, a director.

The indictments charged the defendants with doing business without competitive bidding with companies in which they had a substantial interest. The law

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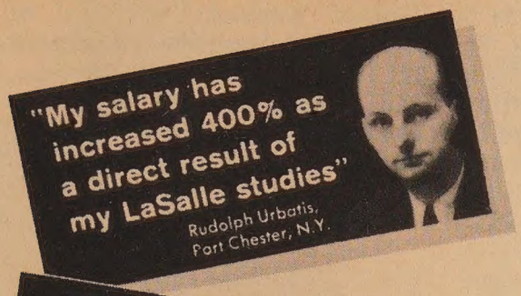

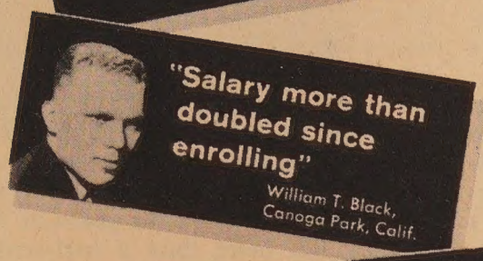

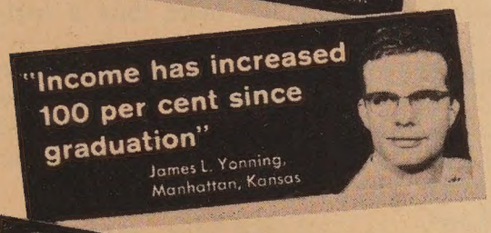

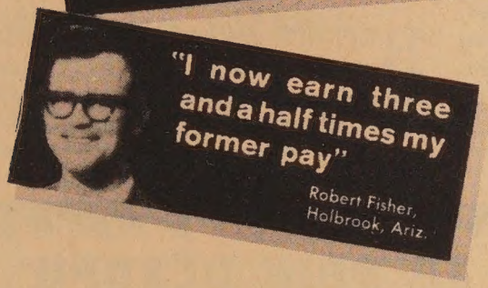

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Death has claimed the man who held the throttle on the last run of the Lehigh Valley's *Black Diamond*. Gen. James W. Davenport, U.S.A., retired, was employed by the LV from 1911 till 1959, with leave of absence for World War II service in the U.S. Air Force in Italy and France. He died at age 75.

Jack Smith and Nelson W. Rehfuss were born the same day, Aug. 1, 1899. Then on July 3, 1916, both started working for the Pennsylvania Railroad and in the same department, Accounting, on 4th Street in Philadelphia. Later they took various jobs, still on the Pennsy, but for the last 20 years of their employment they worked together, both as claim analysists, and both retired the same day, July 31, 1964.

Gilbert Lathrop, author of "Iron Mike" in our February issue and many other stories and articles, is writing a book tentatively titled *Iron Horse Requiem*. Gil lives at 1674 Ave. B. Yuma, Ariz. 85364. ●

MEGALAPOLIS. Indications are that the campaign spearheaded by Senator Claiborne Pell of Rhode Island will bear fruit. Art Knowles' article in the January *Railroad* told about the traffic problems of Megalapolis, that colossal city extending from Boston, Mass., all the way to Washington, D.C., and the solution advocated by Senator Pell and others. We don't know whether or not this article was read by Luther Hodges, then Secretary of Commerce, but we do know that ten days after our January issue came out he showed a lively interest in the project.

Immediately after a budget conference with President Johnson, Mr. Hodges announced that a 200-mph super-railroad might link Boston with Washington within five years, adding that Japan's famed Tokyo-Osaka trains regularly make only 125 mph. He said the President had okayed "substantial" funds in the 1966 fiscal budget to study the Boston-Washington plan. This plan, according to the Secretary (who has since resigned from the Cabinet), is to build a "demonstration train" to test the possibilities. Trains, he pointed out, can move many more people than any other transportation system. ●

THE OLD brass pounders are a vanishing breed. Clayton C. Whisman, the last Morse telegrapher on the Eastern Kentucky Division of the Louisville & Nashville, has retired from his job in DI tower at Ravenna, Ky., and a constantly clicking teletype machine has taken his place, reports I. E. Thomas, former L&N agent-operator, 7604 Cortland Ave., Allen Park, Mich.

Working with Whisman for 25 years was J. W. Stephenson, who was not only a telegrapher but also operated the interlocking system in the L&N freight yards at Lexington, Ky. The two men sent and received a steady flow of messages in the Morse code daily between DI and the GM tower at Lexington. Each man had about 50 years of railroading but more than a half-century of Morse.

"Teletype units do an amazing job," says Whisman, "but they are noisy, waste too much paper, and require a lot of attention. I'll take the music of the telegraph any day." ●

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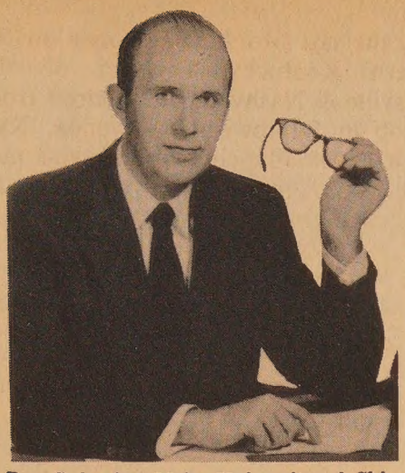

Don Bolander, M.A., University of Chicago; B.S., Northwestern University; Director of Career Institute; authority on adult education.

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Question *What is so important about my ability to speak and write?*

Answer People judge you by the way you speak and write. Good English is absolutely necessary for making a good impression and getting ahead in business and social life. You can't express your ideas fully or reveal your true personality without a sure command of good English.

Question *What do you mean by a "command of good English"?*

Answer It means you can express yourself clearly and easily without fear of embarrassment or making mistakes. It means you can write well, carry on a good conversation—also read rapidly and remember what you read.

Question *Are there other advantages to be gained by acquiring a command of good English?*

Answer Yes! Words are actually "tools of thought." The more you learn about words and how to use them to form and express your ideas, the better your *thinking* becomes. For this reason a command of good English often pays off in unexpected ways.

Question *Wouldn't I have to go back to school for a command of good English?*

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ting fat," writes John Drayton, locomotive engineer on the British Railways, 13 Sycamore Rd., Griffithstown, Pontypool, Monmouthshire, England. "Six months ago, many of them were lean and agile. Now it seems that lack of exercise with the coal shovel is robbing them of slim figures.

"Apparently the British Railways will eliminate steam in each Region successively, but will not do so in the North for several years. Keeping pre-1923 steamers going is not without problems. In Britain today I see rows upon rows of no-longer-wanted steam locomotives awaiting the blow-torch, but I cannot afford to buy spare parts such as whistles, number plates, etc., and pay the transport cost to railfans in the United States. If I had unlimited cash, I might be willing to do such favors.

"Our main-line electrification from Liverpool to London moves on toward completion. Hot wires are now being strung overhead in outer London, the old Euston terminal is being completely rebuilt and modernized. It may become the best station in Europe." ●

A RETIRED Southern Pacific hogger, Lucian J. Platt, Rte. 1, Box 2522, Roseville, Calif., was one of six railroading brothers. Four were conductors; one was a yardmaster. Shortly after Lucian went into engine service, Miss Thelma Yandall, a pert young telegraph operator on the Shasta Division, forked up orders to him as he sat in his cab. Falling in love with the girl, he married her. Recently, just before he took his pension after 48 years on the SP, Thelma delivered the orders for his last run. Says he: "Being with—and going with—my family at any hour of day or night without being called for duty on the railroad is a pleasure." ●

NEWS ITEMS. The Illinois Central reports that it is presently saving about $5½ million a year on crew cutbacks resulting from an arbitration award and a company incentive plan for early retirement. Wayne Johnston, president of the IC, notes that the carrier began to eliminate firemen in yard and road service last May. However, he says, costs are rising because of wage boosts won by the rail brotherhoods.

The Southern Pacific has eliminated its hyphenated division names. The Western Coast Division is now the Western Division, the Sacramento-Salt Lake is the Sacramento, the Portland-Shasta is the Oregon, and the Tucson-Rio Grande is the Tucson.

Four years ago Karl Walters, Milwaukee Road roundhouse foreman at Mason City, Ia., found an abandoned cat in a vacant lot, brought her to the roundhouse, fed her, and named her Smoky. She has been there ever since, earning her board as a ratter. But Smoky is sexually promiscuous. Sometimes she gives birth to three or more litters a year. On her most recent parturition, delivery was so slow that the roundhouse force raised $25 to pay for a Caesarian section. Mother and 2 kittens are well.

A railroad dismantling department with headquarters at 6272 Canal Rd., Cleveland, Ohio, has just been established by the Kaiser-Nelson Steel & Salvage Corp. Says Jack Bayer, executive vice president: "We will buy used and obsolete railroad track, machinery, equipment, and railroad bridges. The many railroad mergers and corporate-structure changes now taking place in the industry are resulting in numerous dismantling operations."

Railroad's next issue will feature an article on the silk trains that ran for many years from West Coast to East at faster than passenger speed. Some silk shipmens were worth $10 million; there was danger of theft and spoilage, and the insurance rate on silk while in transit was very high. *Also*: an IC roster.

The closing down of British rail lines, an unpopular move that the Conservative Government began as an economy measure in March, 1963, has been slowed down by the new Labor Government. Tom Fraser, Transport Minister, promise that no more rail closures will be approved until regional transport plans have been prepared. Thereafter, he says, proposals to abandon any form of rail service will be considered against a background of population trends, economic and social consequences, and road congestion.

Here's a true story that could well have been included in the Raildogs chapter of Freeman Hubbard's book, *Railroad Avenue*: Rex was helping his master, Nels Nelson, chase hogs into a Northern Pacific boxcar at Mandan, N.D. After they were all in and the car was sealed, Nelson looked around for his dog and concluded that the animal had wandered off, maybe in search of a bitch. For two days he worried. Then a wire came from Spokane, Wash., reporting the arrival there of 80 hogs and one dog. Railroaders gave Rex food and water and shipped him back home on the NP crack train *Mainstreeter*. ●

EDWARD WENMORE'S comments on the origin of the Southern Pacific passenger train *Del Monte* in our

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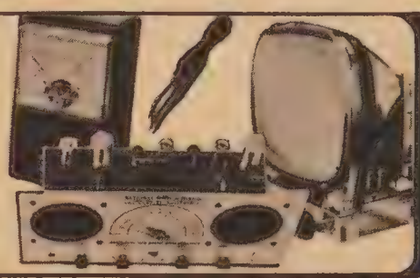

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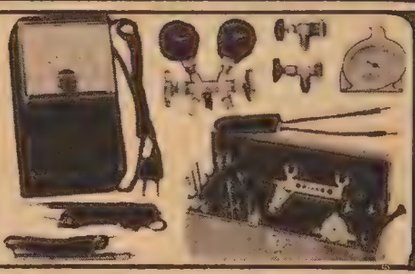

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Mulligan Stew

by John W. Stansfield

There are times
In my restless sleep
I hear the moan of
A lonesome freight;
I feel the cinder sting of
An old coalburning locomotive
And I smell her acrid smoke
As I once more ride
The tops; but . . .

The coalburners are no more;
Their cinders all are cold.
I slowly realize
I have grown old.
Yet the long rails still stretch
Across this,
My beloved land.

What has replaced
The siren whistle's wail
That lured young rebel hearts from
The confining limits of
A tiny prairie town?
To what far land,
By what mysterious manifest,
Has that strange band of men,
The hoboes, gone?

Where now is their meeting place,
Those wanderlust-cursed
Men of my youth,
Who peopled the railroad jungle-land
In those long-ago days?

The mulligan stew,
The bubbling coffee
In an old tin can,
The chicken cooked in patted clay,
And rabbits
Roasted on a wild crabapple stick,
And bread,
Coarse, dry, day-old bread.

I can remember their talk,
The talk of stupid men,
And degenerates,
And philosophers,
And doctors who had failed,
And timid souls afraid of towns,
And the eternal wanderer—
The ever-seeking wanderer,
Talking
Around the jungle camps of old.

January issue interested William D. Middleton, LCDR, CEC, USN. 1061-A Guadalcanal St., Port Hueneme, Calif. 94041, who writes:

"The elegant old Del Monte Hotel from which the train apparently took its name is still around but is no longer a hotel. For some years it has been owned by the U.S. Navy and is part of the U.S. Naval Postgraduate School. The SP still has a station at Del Monte, Calif., directly opposite the former hotel grounds. This depot is shown as a flagstop for the *Del Monte,* now the only passenger train operated into Monterey.

"Last year while spending a month at the Postgraduate School, I lived in the former hotel and rode the train to and from San Francisco on week-ends. Coming or going, I was the only one I ever saw make use of the flagstop station." ●

A CLOSE CALL with death on the Pere Marquette (now part of the Chesapeake & Ohio) is remembered by retired engineer Albert Benson, P.O. Box 1593, Ventura, Calif. 93002.

"One day I headed into Walhalla (Mich.) sidetrack," he wrote in *Locomotive Engineer* magazine, "for the westbound passenger train from Saginaw and I got an order from my conductor, Jake Margolf, to meet an extra at Wingston. Because the air was sticking, the brakes had to be bled before I could get out of Walhalla.

"All went well until I was approaching the curve between Branch and Wingston, when suddenly the freight train that I was to meet came around the curve at a rapid pace, as it was all down hill from Baldwin. I made an emergency stop and reversed to back up, but Charlie Emons, the engineer, made a good stop. It was said that the conductor and engineer had a conversation and forgot Wingston. We figured that had not the brakes stuck at Walhalla we would have met at the curve, so I do thank God for sparing my life again. Once before I had met a freight on straight track." ●

FOR YEARS an unpublicized oil-analysis system of forecasting engine failures has been used for diesel locomotives, but till recently many motive-power men seem to have regarded it as impractical.

The U.S. Navy has developed a somewhat similar system, which already may have saved lives by avoiding plane crashes. In ten months of experimental use in the Government's VIP air fleet, the new laboratory technique—roughly corresponding to blood chemistry tests—has revealed that seven airplane engines were unsuspectedly near a breakdown. One defect was a bad bearing on President Johnson's personal plane that was not detectable by any other means. The test determines whether or not the oil contains a high concentration of sub-microscopic particles of any metal. If it does, that indicates an engine part getting unusual wear. Because of the Navy's success with this system, railroad men are now taking it more seriously. ●

DECEMBER, 1964, was "the best issue of *Railroad* I've ever read," writes "Rocky" Roberts, 210 Colonial Ave., Albany, N.Y. Rocky is a retired ICC locomotive boiler inspector and a longtime writer for this magazine, his latest article being "Boiler Explosion" (Feb. '65).

"The moment I saw that December cover on a news-stand," he says, "I knew it was *Railroad,* for the Santa Fe steam engine had action and the Harvey girls had glamor. Your articles, stories, and departments are well balanced, and I lived over again my memories of 20 years in engine cabs.

"The Jack Pontin write-up is dandy. I started firing on the Boston & Albany in January, 1916, after four years in the roundhouse as wiper, helper, and machinist. Jack hired out later, that summer. I had a passenger run with a 5-hour layover in Boston, where I met him. That portrait made beside the trailer wheels of a Mikado is just as I remember him. Jack stayed on the B&A, but after a spell of running I went over to the ICC." ●

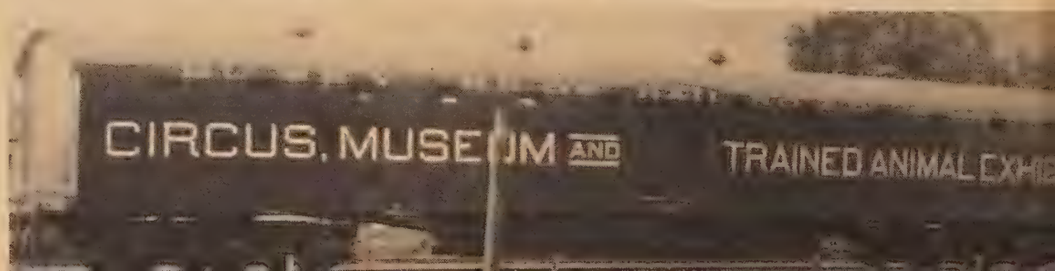
THE LARGEST baggage or stock car built before 1900 was 80 feet long and was used on the 5- or 6-car train of the Rusby Bros. Circus, according to Charlie Campbell, himself a circus man. As the photo shows, one side of the long car was lettered "Circus, Museum and Trained Animal Exhibit." On the other side was "Rusby Bros. Railroad Shows."

Later, in the season of 1907, Charlie tells us, the car formed part of the 8- or 9-car train of "John H. Sparks, Famous Shows." The word *Shows* was used instead of *Circus* to avoid payment of high taxes in some southern states, but all Sparks advertising carried the word *Circus.* Back in those days, a circus was rated largely by two standards: the number of cars in its railroad train and the number of elephants it owned.

"In the 1907 season," Charlie goes on, "the Sparks Circus had loaded late in Carthage, N.C., due to a heavy rain and muddy lot at tear-down time (the time when tents were knocked down and all equipment was loaded on the train). Naturally, bulls (every circus elephant, regardless of sex, is a *bull*) were used to push the gaily-painted wagons with their sunburst wheels off the lot, but foul weather slowed the wagons' progress to the runways. When the train was finally loaded, the trainmaster, at Mr. Sparks' suggestion, asked the engineer to make a fast run. The hogger is reputed to have said, 'I'll get you either in Troy (N.C.) before day-

Photo from collection of Charlie Campbell

Largest stock car built before 1900 was used on Rusby and Sparks circus trains.



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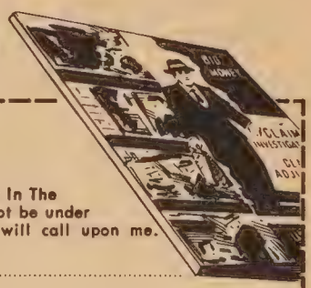

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light or in hell.' Well, sir, just a few miles outside Troy that train jumped the slippery rails. I was told that the boss canvasman gave the hogger a damn good licking at the wreck scene.

"That 'longest' car was in the two-car train of Cooper Bros., which played my home town, Coeburn, Va., early in April, 1923. I remember seeing the trained goats and trained dogs unloaded from the possum-belly. A couple of pals of mine took the circus-dog boy to our old swimming hole to get a bath. He needed it, all right, after sleeping in the same car with the dogs. I helped to carry water for the elephants from that same creek, for which I was given a pass to the show.

"An old friend of mine, Elmer Jones of Warren, Pa., who died last winter, owned several two-car shows and was known as the King of the Two-car Showmen. Around the time of World War II he had sold his cars to a junk man for $60 each. I am quite sure that Big Mary, one of the Sparks Bros. elephants, was unloaded from the 'longest' car that sad day in September, 1918, when she was hanged from a Clinchfield Railroad derrick as punishment for having killed a man in Kingsport, Tenn., the day before. I have a picture of the execution."

(We published such a picture in our *Information Booth* a few years ago.)

Wreck of John H. Sparks Circus train, showing (at left) the largest stock car. Collection of Charlie Campbell

Charlie Campbell continues: "The Sparks train used the old type of wooden flats. Wreck photo shows an old sawmill in the background; it's no longer there. I was born on a circus train myself. My father operated the Campbell Bros. Circus and had bought an old private car, the *Caledonia,* from John Ringling. My family had a 28-car train plus two advance cars which went on ahead to lease tent sites, paste up billposters, get newspaper publicity, and so on. I was born May 30, 1911, in the *Caledonia* on a sidetrack at Phoenix, Arizona.

"I have a large collection of circus pictures, including many train wrecks, and data on more than 130 such wrecks. *Billboard* published my data 20 years ago. Campbell Bros. had three wrecks in the 1910 season, and in not one case did the railroad company pay for the damage and delay. Five of my circus-wreck pictures have never been identified, although I have shown them to some of the country's greatest oldtime circus men."

One of the traditions of the big top was to use the word "Bros." in a circus name, regardless of whether or not there were any brothers in the management. Charlie Campbell, whose address is P.O. Box 301, Sylva, N.C., is a contracting agent for the Al G. Kelly and Miller Bros. Circus, the second largest wild-animal show now touring this country. ●

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Would You Like to Take in $140 after Supper?

This is exactly what L. Burnett did while still employed. Here are his own words:

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Mr. Burnett and one helper serviced this $140 "after-supper" job. The national price guide provides a Duraclean dealer a gross profit of $6 per hour on EACH serviceman plus $9 per hour on any service he himself renders. Your income is limited only by the number of servicemen you employ.

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Dealers operate from a shop, office, or their home. Equipment is portable . . the electric Foamovator converts to a convenient carrying case.

At the start, you may want to render service yourself . . . or you can start out with servicemen. This business is easy to learn . easy to start . . so easy to service that women dealers often do it. We prefer you have no experience . . not have to "unlearn" old methods.

We are NOW enlarging this worldwide system of individually-owned service businesses. If you are reliable, honest and willing to work to become financially independent, we invite you to mail the coupon.

It's Easier than You Think to Start Your Own Business

When you receive our illustrated booklet, you will see the way we show you step by step how to quickly get customers . . . how to steadily build more customers from their recommendations.

All six services are rendered "on location" in homes, offices, hotels, theaters, churches, clubs, motels and institutions.

These superior, safer and convenient methods spread Duraclean dealerships throughout North and South America, Africa, Portugal, England, Israel, Norway and many other countries.

National Magazine advertising explains the superior merits of your services, builds your customer confidence and brings job leads to you.

We and a Duraclean dealer will train you and assist you. He'll reveal his successful, proven methods. We show you all you need to know.

You have pre-tested newspaper and yellow-page ads, commercials, and a full mailing program.

Furnishings stores, insurance adjustors, and decorators refer jobs to our dealers. These year 'round services are in constant demand.

TODAY is the time to reserve a Duraclean dealership . . before someone takes your location.

Start Small, Grow Big . . . in this Booming Business

Many men have said to us, "I can't afford to give up my job till I know I have a sure thing . . . a sound business that will provide both security and a better living for my family."

That made sense to us so we worked out such a plan . . . and those same men are now enjoying Duraclean dealerships in many communities. You don't experiment. You use tested, proven methods. You have our backing and "know how."

Does this appeal to you? Don't decide now. Mail the coupon so you'll have the facts to decide wisely. There is no obligation whatsoever. You will then know whether this is what you want.

You can start small and grow big just as we did. A third of a century ago Duraclean was an idea . . . but it caught fire and spread rapidly to a worldwide service. It spread because it was based upon (1) superior processes and (2) proven customer-getting methods.

Our first service, the care of carpets and upholstery, exemplifies these superiorities. It not only cleans; it enlivens the fibers . . . revives dull colors. Pile rises with new life. Furnishings are used again in a few hours.

There's no machine scrubbing. No soaking. Duraclean cleans by absorption. Mild aerated foam lightly applied, lifts out dirt grease and many unsightly spots like magic.

Government figures show service businesses growing faster than industries and stores . . . $750 million yearly potential just in rug and furniture cleaning. You have 5 other services.

Space here will not permit describing your other services but they are fully explained in the free booklet we'll mail you. You have six opportunities for profit on every job.

A few hundred dollars establishes YOUR OWN business. A day's profit more than takes care of the monthly payments we finance for you.

Men frequently take in partners.

We furnish electric equipment and enough materials to return your TOTAL investment. If you have good habits and know the importance of customer satisfaction, you can likely qualify for a Duraclean dealership.

It's been said, "Opportunity knocks but once at every man's door." This could be that one rare opportunity in your life.

It is surprisingly easy to learn this business. You can decide from the information we will send you whether to apply for a dealership. So, with no obligation whatever, mail the coupon TODAY.

Own a Nationally Advertised Business

•

Your Services Are Endorsed by McCall's Magazine, Amer. Research & Testing Laboratories and by leading Carpet Mills & Furniture Makers

•

What Dealers Say:

Langdon Lawson: National advertising is tops, creates leads. In September, working alone, jobs totaled $1,475.

R. C. Blue: Customer called a prominent competitor. They said they could not clean her badly soiled furniture . . .. to contact me, "if anyone could get it clean, I could"

Charles Randal: Business keeps growing. Made as much as $120 in one day.

D. Kern: Duraclean's proven-best process and the continuous help from headquarters gave me a big jump on all competition.

George Byers: For University, my total billing was $2,416.. Total expenses $814.

Gerald Weihrauch: Three persons called me saw Duraclean advertised in magazines.

Edward Hoy: A smoke damage insurance claim bill was $186. All work was done by me in exactly 8 hours and 2 minutes.

John Hoak: I've never worked at anything I enjoyed more than Duraclean.

W. C. Smith: Earned $650 one week. Volume keeps getting bigger.

Service man for dealer **C. Weed:** Furniture was filthy black. When through, I was amazed how clean.

John E. Frost: First 2 months I grossed $1,000 part-time.

Loren Farris: I'm proud to be independent at 30. I wish I had known about Duraclean earlier.

Earl Davis: Our sales increased $17,660 this year.

Ed. Kramsky: In 2 years, I now have two assistants, a nice home and real security for my family.

Resale Service

If, because of illness, moving or for any reason a dealer wants to sell, we maintain a service to locate buyers and to help him sell.

Dealerships resell at up to 10 times the dealer's cost. R.D.K., after 5 months, sold for $2,000 above his cost. L.L., after 30 months, got $7,116 more than he had paid. The value of your dealership and franchise grows monthly.

FREE BOOKLET tells how to Start Your Own Business

With no obligation, we'll mail you a letter and 24 page booklet explaining this business . . . how and why your income grows . . . how we help finance you.

Then decide if this opportunity fulfills your dream of independence and a much bigger income.

Your location should be taken tomorrow . . . so mail coupon today.

Find Out with NO OBLIGATION

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NEW EQUIPMENT AND NEW GADGETS

by Arthur T. Knowles

First time in history: TV installed on a train for passengers. Atlantic Coast Line has placed television receivers in all coaches, lounge and recreation cars of its *Florida Special* for 77th season of operation between N.Y. and Florida.

The Railroad Epic Is a Story of Increasing Modernization

IT IS NOT true, as some of the armchair experts say, that the railroads of America were at their peak around the turn of the century and have not made any real progress since then.

Let's consider a few of the modern improvements. Take the electronic classification yard. Time was when switch engines handled all the work of a flat yard, taking trains apart and making up new trains—a slow process. Then came the hump yard. Cars were pushed over a grade, and gravity took them into the fanned-out trackage. Brakemen had to ride the cars to brake them enough to prevent their crashing into cars waiting on the tracks in front of them. That job required many men.

Later, an operator in an overlooking tower would control the cars to some extent, depending on his experience and judgment. Then came the push-button yard. Now, when a car is cut off at the top of the hump, it rolls down the incline under electronic control. It is weighted, its speed rate is determined, the switches to a desired track are lined up, the number of cars already on that track is known, weather conditions are considered (speed is affected by a wet track and the direction and velocity of the wind), and a computer tells exactly how much the car should be braked. By this system, freight goes through faster and there is less damage to the lading.

Long ago, a *mudhop* (yard clerk) had to be out in all kinds of weather with a book in which to write down the car numbers as every train came into a yard. Today, he sits down comfortably in the yardmaster's office, protected from inclement weather, and watches a private television screen on which he sees the car symbols and numbers as they roll by, and reads them to a recording tape, which is transcribed later. That is one of the uses of TV in railroading. Another use, on certain Atlantic Coast Line trains between New York and Florida, is the entertainment of passengers.

Freight cars are getting larger and more specialized. Each of the ACL's stainless-steel Whopper Hoppers takes a 135-ton load. They have six-wheel trucks with roller bearings. Another very modern hopper is ACF's "Center-Flow," 125-ton, covered type which can load and unload dry bulk such as cement or grain in minutes. These cars, for distances over 100 miles, haul freight cheaper than motor trucks. The Southern Railway is experimenting with a 250-ton hopper!

The Canadian Pacific has new bulkhead flatcars which handle more lumber than the old types and with less time and effort. Maine Central's "Paul Bunyan" cars for pulpwood are

They ride to death in style. Pigs should feel very happy over the privilege of traveling in a "palace" to the place where they'll be made into ham, chops, bacon, and sausages. Car is 85½′ long, one of the world's largest stock cars. Just completed at the Northern Pacific's Como Shops in St. Paul, it is the prototype for a fleet of thirty such cars planned for construction this year.

Maine Central and Bangor & Aroostook have just acquired 368 72′, 3-bulkhead cars, longest of the type in America, from the builder, Magor Car Corp. Named Paul Bunyan cars, from the legendary giant lumberjack, each has a capacity of 32 cords of softwood pulp. Note the size of section foreman, E. A. Hall.

Milwaukee Road has added new unit to its network of hotbox detectors: wayside equipment at Russell, Ill., and recorder in tower at Rondout, Ill. We see electronics maintainer R. D. Brown adjusting trackside scanner under supervission of E. A. Kerber, assistant engineer of communications. (Right) T. J. Hanlon, supervisor of signals, inspects detector wayside and carrier equipment.

the biggest of their kind ever built. In Jim Hill territory, the Great Northern and Northern Pacific have new double-decker stock cars, each of which takes 325 pigs at a time, and the CP is experimenting with a similar type. And so many new types of tank cars are being built of various sizes and for various uses that we just can't keep up with them.

Larger and still larger transformers are being built for the power companies, but the railroads are keeping up with the increased weight by means of special cars that haul as much as 350 tons apiece. The Southern Pacific's "Hy-Cube" holds three times the volume of a 40-foot boxcar that used to be the standard.

Tri-level rack cars can haul more new automobiles than the double-deckers held and at less cost. The automobile manufacturers are now shipping by rail more than half of their production instead of cluttering up the highways with lengthy auto-carrying trucks, each of which needs two men in the driver's cab. And on the Pittsburgh & Lake Erie and other roads, special gondolas with "clam-shell" covers are now safely transporting rolls of sheet-metal for the automobile industry.

INCIDENTALLY, the latest boxcars coming off the production lines do not have the once-familiar running boards on the roofs, because brakemen no longer have to ride the tops. This rolling stock, 16 feet, 10 inches above the rails, is designed to move automobile parts. Along with new car design there is more efficient braking, better wheels and trucks, more shock control, and greater use of ball-bearings. A boxcar is spray-painted in 30 minutes with one coat of paint that contains the primer, and then passes through a chamber having 2,656 infra-red heating lamps which dry the paint in 30 minutes.

Another sign of progress, on the railroad as elsewhere, is the computer. The Southern and the Chesapeake & Ohio were early users of this "electronic brain," mostly for accounting. Now the computer assists in freight-car control as well—distribution, tracing, diversion, release, and order service. The Western Pacific has adopted what it describes as a total system's approach, giving the management immediate knowledge and control of the whole road. The SP is doing the same. There is even a new name for this, *cybernetics*.

In the past, the railroads were

New telescopic-boom hydraulic crane transfers ties from trucks to New York Central car in salvage operation. A Pittsburgh concern bought an abandoned stretch of the Central's old Putnam Division in Westchester County, N. Y., and took up the rails and ties for 22 miles. The Austin-Western crane is a product of Baldwin-Lima-Hamilton Corp. (three great names in steam locomotive history).

handicapped by the miles they covered —not like an office or factory, all in one building, in many cases all on part of one floor. Better communication is coming along with cybernetics. The New York Central, for instance, is closely tied together from Boston to St. Louis in all its departments and offices; any part is as near as the desk telephone. The Union Pacific, to cite another example, is no longer at the mercy of the frail telegraph and telephone wires that were strung over mountains and subject to disruption by snow, ice, or flood. Modern railroads, like the UP, are served by microwave circuits which leap through space over the Rockies and across rivers and deserts from tower to tower.

Although the diesel-electric locomotive does not have the nostalgic or photogenic qualities of the steam engine, most of our present-day motive-power officials agree that it is doing a better job and at less cost, and enginemen find their jobs in diesel cabs easier, cleaner, and safer. General Motors and Alco are constantly improving their products, getting more power per ton of weight or foot of length.

Louisville & Nashville, working with General Railway Supply, has developed a control whereby a locomotive can be cut into the middle of a long freight train and be operated in unison with the head engine by means of an electronic computer in the diesel's nose. A "load sensor" or strain gage constantly measures the drawbar tension at the front end of the drag of the cars trailing behind and it instantly regulates the amount of power needed. To put motivating units into the middle of a train gives a better distribution of weight and power and lessens the chance of drawbars being pulled out. The fate of a train no longer depends upon the dead-man's pedal in the cab. An "Alertor," developed by the Santa Fe, constantly watches over the engineer and stops the train if he suddenly becomes incapacitated.

Then, too, the day of gangs of gandy dancers is past. Huge mechanized maintenance-of-way machines have taken their place and usually do the jobs better and cheaper—tamping, ballast-cleaning, tie-removing, spike-pulling, and so on. Some of these mechanical monsters have been in use for many years and they are continually being improved. One of the newest, the "Autoliner," automatically tamps the ballast just enough to bring the rail into perfect alignment for tangent track or the correct super-elevation for curves. It is done by means of a light beam on an indicator on a buggy trailing some 120 feet to the rear of the machine. Invented in Minneapolis, it is now being demonstrated by the Great Northern.

You might think that by now the design of rail has been perfected, so very many years after the use of primitive strap-iron track, but the T-rail likewise is being improved. Met-

Southern Pacific's Hy-Cube (many cubic feet) boxcar, built to haul automobile parts for manufacturers, is longer than a bowling alley and large as a warehouse.

Pullman-Standard is building 666 of these flats for Trailer Train Co. Each can be used for general freight or equipped with end bulkheads or tie-down devices.

allurgical technicians are always working on metals to get even stronger rail for the least weight and cost. The new "Hi-Si" (high silicon) steel rail is more expensive than ordinary rails but lasts longer, especially on curves and crossovers. Even the old familiar protective wooden covering for third-rail is giving way to a plastic guard which is cheaper and more efficient and takes less time to install. The New York Central, for one, is using some of it in the New York City suburban zone.

Now we come to the hotbox, once a very costly problem but now tamed by the various hotbox detective systems. When a train passes an installed pickup device alongside the track, every journal of every car makes an indication on a tape in the CTC dispatcher's office and if a journal is overheated it is sharply indicated. The towerman can stop such a train; the engineer phones in for instructions; or, by means of a two-way radio, the dispatcher can tell him just which car has a hotbox. That car can then be either cut out or treated.

Some roads, like the Boston & Maine and the Duluth, Missabe & Iron Range, now keep track of their moving trains by using a Scotchlite identifying patch on the side of cars or locomotives which a scanner "reads" and informs the dispatcher's office, miles away.

Although the railroad passenger business is shrinking and although too many of the coaches in use today are drab and outmoded, there have been some dramatic improvements—dome cars, Hi-Level cars, Sleepercoaches, etc.—even in the passenger department.

As time goes on, there will be faster trains, better trackage (including more sections of continuous welded rail), less grades, and fewer curves. Innumerable minor improvements also are being made. For example, the Long Island is experimenting with an automatic ticket collector at the station. The commuter slips his ticket into a turnstile slot and it is "read" magnetically, differentiating between one-day, weekly, ten-trip, or whatever. The ride is registered on the ticket and in the machine. The Illinois Central likewise is installing this method.

The New York Central is trying out a ticket collection by hand in Grand Central Terminal to reduce the number and bother of ticket collectors on the trains. San Francisco is expected to have an automated rapid transit system using magnetic tickets. And don't forget the supermarket-type pushcarts now used on many railroad terminals for transporting luggage to and from trackside, and the convenience of vending machines that serve hot meals instantly on some trains, and innumerable other gadgets that nobody even dreamed about for railroads in the early 1900's.

These are some of the many ways whereby the railroads of America are being modernized to still greater degrees. It is impossible in an article of this length to mention more than a few of them. Considerable research is constantly being done in the laboratories of the Association of American Railroads, in addition to what individual roads are doing.

John W. Barriger, one of the most knowledgeable railroad men in America, has said that the progress and technological development now under way is only one-third of the potential. He blames this lag on "super-regulation" by the Interstate Commerce Commission and the local regulating boards.

The railroad situation and image being what it is, the carriers are not financially able to carry on more sweeping experiments to improve their own industry still further, and the big investors seem unwilling to risk their money on doing things for the railroads in a really big way—things like greater electrification, for example. But the railroads are not standing still. •

With the conclusion of Milwaukee Road's 3-year program to modernize its passenger service completely, accordionist Marion Carter entertains commuters on train leaving Chicago with final batch of new bi-level coaches. About 75 percent of Milwaukee's suburban riders have been using such equipment since 1961.

Fit for a champ is new padded car in which Atlantic Coast Line is transporting 2200 pounds of prize Brahman bull, *Sugarland Rex Manso 48*, winner of grand national grand championship of Texas Pan-American Livestock Exposition.

The Great Days of Steam and the Glory of

PENNSY PACIFICS

by Fred Westing

Aug. 7, 1954: Black smoke curls back over Pennsylvania train wheeled by No. 16, Class K-4s, near Hazlett, N.J.
Bob Collins photo

Over the ashpit, hostler opens ashpan doors of a Pennsy Pacific and cleans out the pans with a pressurized hose before emptying firebox.

Photo by Bud Rothaar

THE PENNSY'S first 4-6-2 went into service in 1906. At that time, especially on the main line between Pittsburgh and Chicago, passenger trains were becoming heavier and increasingly hard to handle with the rather small-boilered, tall-stacked (4-4-2) Atlantic-type engines then in use.

Frequent doubleheading gave some relief but was not the right answer. Also, in this year the Pennsylvania Railroad was committed to an ambitious program of all-steel passenger-car construction. This focused attention more sharply on motive power. Clearly, a larger passenger hauler was needed—one with more weight on the drivers and an enlarged boiler and cylinder proportions to handle the added ballast.

With the limited axle loads then effective, the choice fell on the six-coupled Pacific type. Such a wheel arrangement, as compared with the Atlantic, permitted the use of a more spacious boiler while retaining the wide, deep firebox back of the driving wheels and over the trailing truck, which provided the necessary steam for maintaining high speeds with heavy trains. At the same time, sufficient weight now placed on the drivers developed a comparably high tractive force, the lack of which accounted for much of the wheel-slipping on small Atlantics in starting and accelerating the heavy passenger trains.

Prudently, the Pennsy began with one Pacific rather than several. Designed by the American Locomotive Company and built at Pittsburgh in 1907, she was given the road number 7067, Class K-28, and was tried out on the Pittsburgh-Chicago line. This line includes a long, straight stretch through Ohio, known as "the racetrack," on which, a few months before, the Atlantic-type 7002 was credited with having made 127.1 miles per hour, a global record never before or since beaten by any steam engine.

With her gargantuan boiler and shortened stack and domes, the 7067 was a visible forecast of future locomotive styling. Among Pennsy men she was affectionately termed "Fat Annie." She represented an unusually high capacity for a locomotive using saturated (non-superheated) steam and was, in fact, referred to with pride as the world's largest passenger locomotive.

Fat Annie had 24x26″ cylinders, 205 pounds of boiler pressure, and driving wheels 80″ in diameter, She carried 173,550 pounds on the drivers as compared with the Atlantic's mere 122,900 pounds. One variation in Pennsy practice was her round-topped, radial-stay firebox, unlike the usual square-shoul-

Taking advantage of a low footbridge at Morgan, N.J., Don Wood shot this K-4 hauling 12-car passenger train to Bay Head Junction at about 50 mph.
Rail Photo Service, Boston, Mass.

dered Belpaire type. The tender ran upon two four-wheeled archbar trucks and was fitted with power-operated gear for scooping up water from the track pans at speed.

The Pennsy's first Pacific was no mean performer. She made 615 trips in a period extending from August 1, 1907, to January 1, 1910. On a line of undulating profile with maximum grades of one percent and with trains of 8 to 13 cars (usually averaging 12 in regular express service), the 7067 made time on 133 of those trips and *made up time* on 446 trips (72.5 percent of the total number).

On one occasion she actually regained 75 minutes with a 13-car train making 13 station stops in a 175-mile run! This speaks volumes for her accelerating ability. Firemen reported that she was a free steamer, easy to fire and easy to ride, with a minimum of noise and vibration.

FAT ANNIE sold the Keystone Road on the Pacific type as a model of efficiency. This fact became clear in 1909 when the Fort Wayne Shops prepared drawings that led to the first Pennsylvania-built standard 4-6-2, Class K-2. The new engine was based directly on the 7067 and retained the latter's statistics in boiler size, cylinders, wheels, and steam pressure.

She featured the usual Pennsy Belpaire firebox. Her straight-line running boards without "humps" followed the system's policy of clean-cut construction. In 1910 new K-2 engines of this design, headed by 7510, began coming from the Juniata Shops at Altoona, Pa., in increasing numbers. These locomotives went into service on the Lines East and West of Pittsburgh and were soon handling tough passenger-train assignments.

Following the appearance of the first K-2, slight modifications were made in the boiler and cylinders, and later locomotives of this type were classed K-2a. In 1911 the Keystone Road began utilizing the advantages of superheating. No. 7514, a big K-2, built in 1910 for the Lines West, became the first Pennsy locomotive equipped with a superheater. Tests proved the value of this device so plainly that in April, 1912, the superheater became standard practice on the Pennsylvania. Then known as the Schmidt fire-tube superheater, it was developed from the designs and lengthy experiments of Dr. Wilhelm Schmidt of Germany. This device became popular.

Locomotive with superheaters had the suffix "s" added to their class designations. Thus K-2 became K-2s, while K-2a became K-2sa. The K-2sb engines deviated from their sisters in their possession of 72″ driving wheels as compared with 80″ on the others. The K-2a's and K-2sa's had high tender decks 6½ feet above the rail top, flush with the engine crew's seatbox flooring, which provided room below the tender floor for the Crawford automatic stoker mechanism. These engines also had high-collar tender sides to make up for the coal space lost when providing room for the stoker.

This stoker was invented by David F. Crawford, general superintendent of motive power of the Lines West of Pittsburgh. It had quite a vogue for a while. While functioning properly, it produced almost smokeless combustion, for which it was highly regarded. The stoker was of the underfeed type. Coal was mechanically conveyed to two longitudinal feed troughs, or retorts, located in the firebox. Here it was fed under (hence the term *underfeed*) and up into the troughs, to be forced out over their tops into the firebox by reciprocating plungers.

The conveyor on the tender and the firebox plungers were operated simultaneously by a steam device carried on the locomotive. This mechanism was placed entirely below the deck. The firedoor was built so that, should the stoker become inoperative on the road, the locomotive could be hand-fired.

From 1911 to 1913 superheated K-2 engines continued to be built, and Alco's Schenectady plant accounted for ten equipped with Crawford stokers. At first the K-2's had their sandboxes

Pennsy 3770 and 3684, both K-4s, speed westbound train past Genoa, Ohio, at about 65 mph. Note the disk drivers on first engine.
Photo by C. W. Burns

placed quite a distance back on the boiler, behind the bell, and some retained this location until the end of their days. Others had the sandbox further ahead on the boiler, right behind the stack. This was done because at some enginehouses it allowed the coal in the tender and the sand on the locomotive to be replenished in one "spotting" without extra engine movements.

In their last years a few K-2's used saddle-type sandboxes similar to those on the E-6 and K-4 classes. All in all, the K-2's turned many passenger miles into profits and dividends for Pennsy stockholders.

The Pennsy's 3570, K-2s, rolls over Long Island Rail Road tracks at Syosset.
Robert F. Collins (E-L train dispatcher), 436 Radcliffe St., Wyckoff, N.J.

NOVEMBER, 1911, found Alco building an exceptionally large Pacific of its own design at Schenectady. She was given road number 3395, Class K-29. This locomotive was more or less an enlargement of Alco's famed experimental locomotive of 1910, No. 50000. Her designers aimed at maximum power with minimum weight. She had a Schmidt fire-tube superheater, a Crawford stoker, and a brick arch in her firebox. The weight on drivers was 197,800 pounds, cylinders were 27x28″, drivers 80″, and steam pressure 200 pounds.

An interesting item was her screw reverse gear. This arrangement, which used a large hand-wheel, did away with the difficulty experienced by hoggers in attempting to "hoss over" the old lever across the quadrant to reverse the locomotive or "notching her up" when running.

With these large locomotives working steam, it became dangerous to change the position of the reverse lever. Enginemen would let it remain in one spot rather than chance a serious injury. This prevented the proper expansive action of the steam, with its attendant economies. The wheel and screw reverse banished this situation by giving about eleven times the leverage of the older method with a few easy turns of the hand-wheel. This device was so well received that the Pennsy copied it and applied it to existing and newly-built locomotives. The screw reverse gear had been used abroad for many years, but Alco's design had certain improvements which made it more suitable for American practice.

The boiler of No. 3395 was of mammoth size, 89″ in diameter at the dome course, while the firebox, like that of Class K-28, was of the wide radial-stay type. No. 3395 demonstrated the stoker's value. When hand-fired at the rate of 5,000 pounds of coal an hour—a good figure for sustained manual firing — she produced an equivalent evaporation of 45,307 pounds of steam per hour. With stoker-firing at the rate of 9,600 pounds of coal per hour, the equivalent evaporation was 72,229 pounds. Thus the stoker, when applied to a boiler of sufficient size, justified its application because it evoked the maximum boiler power. In fact, 59 percent more power was available with stoker-firing than with hand-firing.

Although this engine was never duplicated, she threw much light on the actions of such a big locomotive and her possible place on the Pennsy. With a tractive force of 40,824 pounds, she surpassed any passenger-hauler then operating on the road.

In 1913, Baldwin Locomotive Works built 30 superheated Pacifics classified as K-3s, all for the Lines West of Pittsburgh. Except for larger cylinders, 26x 26″, they were duplicates of Class K-2s

Hostler A. Arons gives the 3750 a drink at the South Amboy enginehouse, filling her 13,000-gallon tank in a few minutes.
Photos by Gene Gentsch and Bud Rothaar

The Pennsylvania's first K-4s, No. 1737, with a full head of steam and a tender filled with coal, at Bay Head Jct., N.J.
Photo by Robert F. Collins

and all had Crawford stokers with a brick arch in the firebox. One of them turned out in 1913, road No. 8661, bore construction number 40000, making her Baldwin's forty-thousandth locomotive. Years later, five of these K-3s's were sold to the Norfolk & Western and operated on that railroad as Class E.

Meanwhile, in December, 1910, the Pennsy's partiality for Atlantics had developed a mighty and big-boilered 4-4-2, Class E-6s. This breed came out in quantity in 1914. Classics of the locomotive world, they did spendid work, particularly on low-graded sections where they outperformed the larger K-2 Class at speed. But under the necessity of hauling still longer and heavier trains of all-steel equipment, the E-6s, despite its great power, was steadily overloaded. Even the heavy axle

Built by the Altoona Shops, No. 5475, Class K-2s, was regarded as mechanically perfect and was a magnificent performer.
Photo by Harry F. Schodde

loading—already at its permissible limit—could not provide the weight on drivers and corresponding tractive force for those heavier trains. Conditions demanded a large six-coupled Pacific type locomotive in excess of the K-2 and K-3 classes.

THIS need was especially urgent on the Pittsburgh Division, the Pennsy's locomotive testing ground. Doubleheading was too frequent; more power per locomotive unit was the answer. By 1914 it had become clear that heavy Atlantics, superb as they were on the moderate grades, were not at their best on the hilly Pittsburgh Division. The time was ripe for a new Pacific.

James T. Wallis, then general superintendent of motive power, pondered on this question to good purpose. In May, 1914, the Juniata Shops turned out a new Pacific, No. 1737, Class K-4s. Built by the Keystone Road at the same time was their first Mikado (2-8-2) freight-hauler, No. 1752, Class L-1s. Her boiler and that of the K-4s were interchangeable, this being the first such instance in Pennsylvania history.

Many features of the E-6s were used on the K-4s. Chassis and running-gear details show this conspicuously. So similar were the details that the K-4 was really an expanded E-6. With this background, the K-4 got off to a good start, but it appears that Alco-built engine 3395 fits into the K-4's background as well. The big K-29's cylinder proportions were used on the K-4. Also, the very large boiler of 3395 was a guide as to what could be expected from a design that the K-4 boiler closely followed in regard to the size and weight. In fact, the dome course of the K-29 and the K-4 had the same diameter, 89″.

The K-4 boiler was of the conical-connection type made up of three boiler-shell courses. The first two were coned on the top side only, and increased in diameter from 78½″ at the smokebox to 89″ at the third, or dome course, which was not coned. A Belpaire firebox was applied and its brick

Photo by Robert F. Collins
The 1120, Class K-4s, speeds past South Amboy with a sky-filling smoke plume.

Several of the Pennsy's K-46 passenger locomotives, including No. 1120 (below), were streamlined.
Pennsylvania Railroad photo

A Pennsy Off-the-Beaten Track excursion train at Logansport, Ind., on October 4, 1936, doubleheaded by engines 3378 and 3397, en route from Chicago to the road's Butler branch, normally used for freight only.
Pennsylvania Railroad photo

arch supported on three water tubes. For accommodating the heavier exhaust from larger cylinders, the K-4 stack was rather large, and it tapered gracefully in width from bottom to top.

Inside the stack's rim was a cored passage through which steam flowed from an external pipe connected to the back of the stack top. This was a smoke-lifter. When steam entered the internal passage, small openings emitted steam blasts inward and upward inside the stack, which effectually reduced smoke. A Schmidt superheater was used.

The cylinders were 27x28″, with 12″ piston valves. All cylinder passages were arranged to offer minimum resistance to the flow of live and exhaust steam. Outside pipes, as first introduced on Class K-29, fed steam to the valve chests and enclosed piston valves. Extended hollow-bored piston rods ran in guides like those on the big Atlantics. Crossheads, which worked in three-bar guides, turned the reciprocating motion into rotary. Walschaerts valve gear distributed the steam to the cylinders. Its component parts, like those of the E-6s's, were of heat-treated steel and light weight. The screw reverse gear, which could be operated in a limited space, enabled the length of the cab to be shortened substantially. A new spring equalization system improved riding qualities greatly by making possible the proper distribution of weight between the front truck and driving axle.

IN COMMON with Pennsy motive-power routine, No. 1737 went into action at the Altoona Test Plant. Here, in point of power, she outperformed all other passenger locomotives tested there. With a starting tractive force of 44,460 pounds, she showed an increase of 42 percent over the E-6s Atlantic, and 36 percent over Class K-2s. At a speed of 50 miles per hour she developed more than 3,000 indicated horsepower.

The boiler was such a good steamer that at speeds of 60 miles per hour the locomotive could be operated on exceptionally long cutoffs without draining the boiler of steam. For any given amount of fuel furnished to the boiler, the K-4 would produce more power than any locomotive ever tested at the plant.

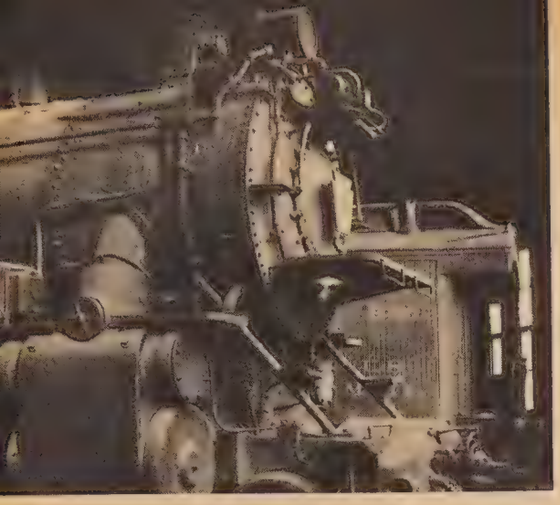
The square-case oilburning headlight and wooden pilot bars were a carry-over from earlier-day railroading. Another "period piece" was the low-sided tender tank, long a feature of Pennsy power. This made sense, too, for with strategically located track tanks to replenish the water supply "on the fly," why lug around tons of dead weight in water? Operating conditions in those days also had locomotives running over only one or two divisions, thus letting the coal supply suffice. Later, when locomotive runs were lengthened and some track tanks removed, the big tender became a must.

In regular passenger service the big K-4's scored an immediate success; and from 1917 on, they appeared in ever-increasing number until they reached a total of 425. The heaviest work came their way. On the tough Pittsburgh Division they were clearly superior to all other passenger locomotives in that area. These earlier K-4's followed the pattern set by No. 1737, but in 1920 a deviation came. At that time a series of new K-4's numbered 3726 to 3775 were turned out by Juniata.

This group used non-lifting injectors with steam pipes and a steam turret placed outside the cab. The injectors also were outside the cab. An extension lever with a piston-like handle ran from the injector into the cab for control by the engine crew. Valves for operating the water intake and overflow valves were placed in front of the locomotive crew's seatboxes. This reduced much

Photo by Robert F. Collins

Pulling out of Chicago, train 78 with Nos. 2032 and 5496, both Class K-46, and a long passenger consist, is headed for Chicago.



Only two K-4's are left: 3750 (above), renumbered for first K-4, at Northumberland, Pa., and one on Horseshoe Curve.
Michael A. Eagleson, Glen Ridge, N.J.

piping and gave the backhead an unusually neat appearance.

Meanwhile, electric headlights had been standardized on the Pennsylvania, but the old style square-case design still housed the new 200-watt bulb. A small steam turbine-electric generating set was placed right in front of the stack to supply electricity. In 1923 the 3800 series of Class K-4 came out, and in them the square-case headlight gave place to a smaller round-cased container. Another change was the application of an Alco power reverse gear, which made the wheel and screw awkward and slow by comparison.

Then the 5300 series appeared in 1924 and matched the 3800 group in construction. Both series had high-collar tenders. By 1925 the smoke-lifter pipe arrangement was being removed, and a novel tender designed by William F. Kiesel, Pennsy mechanical engineer, was built in 1926 for Class K-4. This new tender was applied to 100 locomotives of Class K-4, built in 1927 and 1928, and for the first time an outside builder shared honors with Juniata Shops in their production. An order of 75 of them, completed in 1927, was given to Baldwin, road numbers being 5400 to 5474. The Altoona jobs, completed in 1927 and 1928, were numbered 5475 to 5499.

ENGINES 5495 to 5499 had cast-steel frame beds which embodied main frames, cross-bracing, and cylinders and saddle in one unit. They differed from the preceding groups in having duplex crosshead guides, first with safety straps and later without; new tenders, and absence of a smoke lifter and extended piston rods and guides. These latest engines, which were hand-fired, represented maximum efficiency with a minimum of accessories which kept down their original cost and maintenance charges. They acquitted themselves superbly and were soon handling the road's name-trains.

Then an ICC ruling required engines over a certain weight to have stokers applied. While increasing the locomotive's first cost and maintenance, this ruling was a boon to the K-4, bringing out the tremendous latent power available in the big boiler. Enormously high firing-rate capacities had been impossible with hand-firing, but now old records were broken and new ones made as the K-4's, especially west of Pittsburgh, took over.

With the streamlined trend, some experimentation took place along these lines on the K-4s, No. 3768 being perhaps the best known of the lot. But the majority remained non-streamlined to the end of their days. Later, certain K-4 engines had extra large tender tanks, Baldwin disc driving wheels, front-end throttles, and poppet valves.

In 1929 the Pennsy put two very large Pacifics into service. Designated as Class K-5, No. 5698 was built at Altoona. The other, No. 5699, was Baldwin. The main difference between them was that 5698 had Walschaerts valve gear while 5699 used the Caprotti poppet valve gear for steam distribution. The Caprotti gear was unable to cope with Pennsy demands and eventually gave way to the conventional Walschaerts. The 5698 and 5699 were on the ponderous side and never achieved the success of the less massive K-4. Their mere weight created prohibitive restrictions which rigidly limited their field of action.

In 1939 the Franklin Railway Supply Company installed its system of poppet valve steam distribution on a K-4 locomotive at the plant of the Lima Locomotive Works. This sample locomotive, No. 5399, was placed in service on Fort Wayne Dvision. On Nov. 5, 1939, she hauled the *General*, from Crestline to Chicago, a crack train of 13 cars and a weight of about 914 tons. The train left Crestline nine minutes late and stopped at Fort Wayne for seven minutes instead of the scheduled five minutes but passed Liverpool eleven minutes ahead of time. For the 131.7 miles from Crestline to Fort Wayne the average speed was 67 miles an hour.

For the 117.8 miles from Fort Wayne to Liverpool the average speed was 77.7 mph. From Warsaw to Liverpool, 78.8 miles, the speed averaged 84.43 mph. This was the sort of everyday running turned in by a design that basically dated back to 1914 and was still breaking records 25 years afterward.

Even though in later years the gigantic T-1 and then the diesel inexorably nosed out the long-reliable K-4, rest assured that the Keystone Road was well satisfied with its 4-6-2's. If you want further proof of that, look at No. 1361, the lone engine that stands guard today over Horseshoe Curve. That K-4 that has been preserved as a lasting monument to the great days of steam and the glory of Pennsy Pacifics. •

Pennsylvania Railroad photo

Crowd views the dedication of the Pennsy monument at Horseshoe Curve, the 1361.

by Arthur W. Weber

There Is Too Much Red Tape in

SELLING PASSENGER FARES

ONE Friday evening I walked into a railroad ticket office in the Detroit area and asked the telegraph operator on duty for a round-trip coach ticket to Peoria, Illinois. I wanted to take an overnight train to Chicago, spend part of Saturday riding the Rock Island to Peoria and back, join members of the Railroad Club of Chicago on Sunday for an inspection of the Mid-Continent Railway Museum at North Freedom, Wisconsin, and then take an overnight train back to Detroit in time for work Monday morning.

Thinking that I knew which railroad provided the only passenger-train service between Chicago and Peoria, I was a bit surprised, eleven minutes later, to get a four-coupon ticket routed via the Burlington west of the big city. Without comment, I took it and walked away. If I were right and the ticket-seller was wrong, I could still buy a new round-trip ticket in Chicago via the correct route and get a refund on the unused Burlington coupons in the original ticket.

What would happen, I wondered, to the inexperienced traveler attempting to use my ticket for a trip to Peoria? With only two hours between trains, he'd undoubtedly miss the morning *Rocket* from Chicago's La Salle St. Station while trying to get assistance in Union Station, which the Burlington uses. And the public-relations value to the railroads would be nil.

Mine was a typical example what often occurs, due to the complicated tariff and sales-aid publications provided by the railroad industry for the use of ticket-sellers. Consider the *Eastern Railroads Tariff Bureau Joint Passenger Tariff RTW No. 3,* which lists the round-trip fares between Detroit and Peoria and specifies the routes via which they apply. This is just one of about 130 interline tariffs—those involving use of two or more railroads—which list point-to-point fares between North American cities.

To look up a round-trip fare between Detroit and Peoria in *Tariff RTW No. 3* you must first to find in it the round-trip basis between Detroit and Chicago. There are two to choose from, depending on the route desired. These routes are explained in a remote section of the *Tariff*. After determining this route, it's still necessary to check *Supplement 3* to apply the 10 percent fare increase taken by Eastern railroads after Congress repealed the Federal tax on passenger tickets almost two years ago. Then, in another section, you find the additional amount to add from Chicago to Peoria, with which is indicated the only applicable route between Chicago and Peoria: the Chicago, Rock Island & Pacific.

IT IS puzzling to realize that the end results of all the fussing around with *Tariff RTW No. 3* comes out the same as if you just added the local Detroit-Chicago round-trip fare to the Rock Island's local round-trip Chicago-Peoria fare. No doubt a lot of tariffs could be eliminated if the railroads would just cancel all the through interline fares that apply via routes not having through service.

With just one tariff for each passenger-carrying road there might not need to be more than about 65 passenger tariffs in existence. However, the industry now publishes more than 200 (interline and local) just for one way and round-trip coach and first-class fares.

There is plenty of evidence of an excessive number of passenger tariffs. You learn, for instance, that a number of interline publications produced by passenger-rate bureaus in the East merely duplicate other tariffs published by agencies in the West.

Tariffs are not the only means of finding out which carrier offers through passenger service between Chicago and Peoria. The latter is found in the index of *The Official Guide of the Railways,* and the Burlington is the first road listed as offering passenger service there. Since the Burlington also serves Chicago, we begin to understand why a telegraph operator would route the Chicago-Peoria coupon of a ticket via the CB&Q. But by checking out the table numbers indicated, you discover on further scrutiny that Burlington actually has no passenger-train service whatever at Peoria. Trailways bus schedules between Peoria and Galesburg, to the west, are indicated for connections with mainline trains to and from the west.

The incident reminded me of the job I had a few years ago in the Chicago reservation-information bureau of a

major railroad. I squirmed every time I heard a fellow clerk answer an inquiry about service to Peoria by suggesting that the caller contact the Burlington. Apparently many railroad ticket and information clerks are in the habit of routing passengers via the first connecting line listed under a given destination in the index to the *Guide*, without bothering to see which road actually has the best service from any given station.

It is disturbing to think that the industry's passenger-sales-training programs produce such results. However, if you look at the multitude of railroads and table numbers listed after some stations in the *Guide* index, you can easily understand the reluctance to check them all out for the best service. Eleven minutes is enough time to spend in making up a $35 round-trip interline coach ticket that doesn't involve any reservations.

The Official Guide is the only complete publication of rail passenger schedules in North America, yet about half its pages are devoted to listings of "freight-service-only" railroads and trackage plus rosters of officials having nothing to do with passenger sales. This sort of material puts a subscription to the railway guide in a price range about double that the *The Official Airline Guide*. That's more than many travel agents want to pay, which partially explains why they're more interested in selling airline tickets than promoting rail travel.

TRAVEL agents can't be critized for not wanting to invest in a subscription to the higher-priced *Official Guide of the Railways*. Since airlines provide them with ticket stock and tariffs, it's much simpler and more profitable for them to promote air travel and neglect the railroads.

Even railroad budgets don't indicate great enthusiasm for the subscription cost of *The Offical Guide of the Railways*. Last May, after spring timetable changes had taken effect, the office that sold me the Peoria ticket was still relying on a February issue that had been used and handed down by three other offices. The summer travel season would reach an end before a May *Guide*, with more accurate schedule and equipment listings, would be available at this station—although the station serves a suburban area with a population of about 250,000.

To complicate matters still further, the man behind the ticket counter has no map to help him to determine quickly which of many railroads serving a given city offers passenger service.

With very few exceptions, the present separate maps of individual railroads make no distinction between freight-only and passenger trackage. A ticket-seller or travel agent has no choice but to check out laboriously the schedules of each connecting road until he finds the one best suited to his customer's needs.

To those of us who think that major segments of the U.S. railroad industry want to get out of the passenger business regardless of potential profits, the incident of the Peoria round-trip ticket is just one of many ways whereby such a goal can be achieved. Antiquated and cumbersome sales methods are retarding productivity. They stifle the enthusiasm of railroad ticket-sellers and travel agents to a degree that negates any increase in public interest generated by Slumbercoaches, dome cars, reduced fares, and other improvements offered by the more progressive railroads.

FOR SOME time the same road has been offering to honor coach tickets in lower and upper berths on payment of the applicable Pullman fare. At the Public Service Commission hearing, that road was quick to point out that this arrangement hadn't appreciably increased patronage, while those protesting claimed that the railroad didn't advertise it enough.

Skeptics arranged for inquiries to be sent to major ticket offices of a top passenger-minded Western road, asking about service to the East that would involve travel via the connecting service which was to be discontinued. The inquiries specifically asked if there were any trains involved that would permit honoring of coach tickets in the sleeping car. Replies from ticket offices in three Western cities with populations of 616,500, 475,000, and 265,000 respectively indicated a total lack of knowledge of any such arrangement.

With the discontinuance of a heavy-loss passenger service between Detroit, Saginaw (pop. 98,500), and Bay City (pop. 53,000), another Eastern railroad recently discontinued all its ticket sales and passenger information services at the two northern cities. This forced potential passengers to resort to long-distance phone calls or burdensome correspondence to arrange trips over the remaining passenger routes from Detroit. It appears to be a deliberate attempt to bring the road's remaining passenger trains further into the red.

We cannot believe that the antiquated passenger-sales methods of the railroad industry are still with us merely through an oversight by management. Attempts to have sales methods keep pace with technological improvements have been so feeble that you might just as well say they're non-existent. Perhaps this is what Commissioner William H. Tucker of the ICC had in mind when he addressed rail passenger traffic officials and ticket agents at Miami Beach not long ago.

"So long as there is a climate catering to what seems to be a national urge to fly or drive," said Mr. Tucker, "it's going to take more than the development of a better travel package from a technical standpoint.

"The advent of an efficient rail service is not by itself going to bring passengers streaming to the doors of the nearest railroad station. . . . What is needed is a fresh perspective on the part of rail management dealing with passenger service. Many people do not realize the advantages of travel by rail."

A "fresh perspective" might well be a desire to achieve the following goals, and quickly:

(1) Publication of an accurate map showing all North American rail passenger service, with reference numbers related to corresponding table numbers in individual timetables or the *Official Guide of the Railways*.

(2) Production of an exclusively passenger service railway guide in loose leaf form, reducing the high cost to users who now must pay for a complete new issue each month.

(3) Reduction in the quantity of rail passenger tariffs to not more than four separate regional publications. All of these should be kept on file at every railroad ticket office and travel agency, enabling one to determine quickly costs for rail travel between any two points in North America.

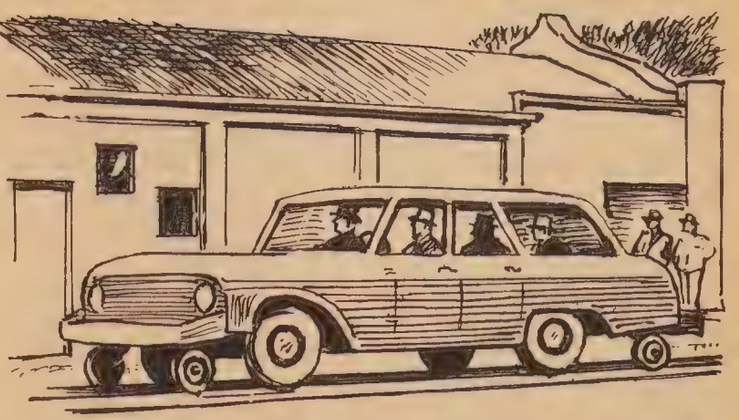
(4) Elimination of through fares applying via routes that don't have through service, to provide a more realistic relationship between fares and service.

There are lots of miles left in our passenger trains—and profits, too. Attainment of these goals is essential if the industry expects to earn maximum revenue from the "return to the rails" that's bound to result from the recent alarming increases in highway fatalities and auto insurance rates, not to mention highway traffic congestion. ●

ALONG THE IRON PIKE

by Joe Easley

NEW STONE CAIRN HAS REPLACED OLD SIGN AT CLIFFSIDE, B.C., ON VANCOUVER ISLAND, MARKING SPOT WHERE LAST SPIKE WAS DRIVEN AUG. 18, 1886, ON ESQUIMALT & NANAIMO RY. (NOW PART OF CANADIAN PACIFIC).



OCCUPIED BY SECRET SERVICE MEN, THIS RAILCAR PRECEDED CAMPAIGN TRAIN OF LADYBIRD JOHNSON ON LOUISVILLE & NASHVILLE LAST FALL.
(L.C. Lively, 2224 N. 12th Ave., Pensacola, Fla.)

LAST PASSENGER CAR OF WESTERN & ATLANTIC (NOW PART OF L&N) STANDS 3 MILES EAST OF L&N DEPOT AT PADUCAH, KY. THE W&A OWNED AND OPERATED THE GENERAL, CIVIL WAR ENGINE.
(Leo Myers, 6725 Olive Blvd., St. Louis, Mo.)

WHEN COLD SNAP HIT ALABAMA, ICICLES HAD TO BE CHIPPED OFF OAK MOUNTAIN TUNNEL BEFORE CENTRAL OF GEORGIA TRAINS COULD RUN FROM WINBURN TO LEEDS.

RACK RAILWAY TODAY CARRIES TOURISTS UP TO CRATER OF MT. VESUVIUS, THE NOW-EXTINCT VOLCANO WHICH DESTROYED ANCIENT ROMAN CITIES OF POMPEII AND HERCULANEUM IN 79 A.D.

Interesting Railfans No. 27

JAMES A. BROWN

IT'S ABOUT time we had a Canadian in this series, and James A. Brown is as good a man as any to begin with. Jim is a photographer, one of the best; a railroader, and president of the Upper Canada Railway Society.

Born in Toronto on August 19, 1938, with no "rails" in his family tree, Jim recalls that his earliest recollection of trains, at age three, was the "terrifying" spectacle of a Canadian Pacific double-header. That in itself is remarkable. We don't know many people who can remember anything that happened when they were only three.

Anyhow, Jim grew up and went to the University of Toronto. One of his fellow students was a cute little trick named Ann Macpherson—as Scotch as he is Irish. Their first meeting was on a Toronto subway train. They fell in love and were married in 1962, shortly after he'd received a degree in mechanical engineering. Jim is appalled at the thought of what he might have missed if the city fathers had decided, some years ago, against providing underground transportation.

Meanwhile, the young fellow had been reading *Railroad Magazine*. This not only prompted him to get a railway job but showed him how to do it. He was rather ignorant of hiring practices, he told us, "but one day in 1956 I followed the lead of certain heroes in *Railroad* fiction tales by visiting the chief dispatcher to get a job—and it worked! The Canadian Pacific took me on as a signalman for summer relief. Pretty soon I began showing an interest in rail photography, taking pictures of activity outside the towers in which I worked. Then a signal maintainer sold me a Rolleiflex, and from then on I was a confirmed camera bug."

His job was not unexciting. One warm night about 3 a.m. a cut of seventeen cars was left unattended on the main line some distance from his tower. It ran away, into another freight, with a terrible bang. "Luckily, no one was killed," says Jim, "but we had some anxious moments searching the wreckage."

After graduation, he took a more permanent job with the Canadian National. He'd written a college thesis on the gas turbine locomotive, so they assigned him to do experimental work on a General Motors 1200-hp diesel engine burning crude oil, in Montreal and Ottawa. Ann went along with him, of course, as she usually does on fantrips, but has never quite became a railfanette.

"As a continuing part of the experimentation," Jim adds, "both the CN and the CP have locomotives operating today on crude oil out west."

In July, 1963, Railfan No. 27 was transferred to his present job as assistant mechanical engineer in the Great Lakes Region, with headquarters in Toronto. His duties there center around the National's new push-button yard, which is scheduled to open officially in May.

"My pet project is the spot car-repair facility," he explains, "in which bad-order cars needing light repairs are advanced automatically to repair and air-

Jim Brown (right) and Brian West, active members of the Upper Canada Railway Society, study a timetable in the private car owned and operated by the UCRS.

Before the Society's private car goes on a fantrip, Jim puts up marker lights.

Canadian National 4-6-0 pulls excursion train for Canadian Railroad Historical Asso. (Note bi-lingual crossing sign.)
Both photographs on this page by James A. Brown

The quiet evening of February 17, 1959: Canadian National steamer in solitary grandeur at Spadina roundhouse, Toronto.

brake test positions. It's thrilling to play a responsible part in the design and operation of this facility, especially when you have an extra-curricular interest in railroading, as I have.

"Possibly my biggest regret in life is that I waited until 1959 to join the Upper Canada Railway Society. Had I joined earlier, I would have become familiar with certain railway activities that I missed in my lone wanderings. Steam locomotives, for example. By 1959 steam was all but dead in southern Ontario."

Five years ago one of Toronto's city controllers expressed an interest in preserving a Canadian steam locomotive somewhere in the city. Without really expecting anything to come of it, Jim Brown wrote to him, offering to assist in such a project. He recommended a Canadian National 4-8-4 of the 6200 series, those engines having been the National's mainstay in both passenger and freight service. The official quickly accepted his offer.

"Between us," Jim relates, "we managed to get the CN to donate the handsome 6213, arrange a suitable display site, have the steamer moved to that spot, and protect her against vandals by means of an iron picket fence and plexiglas windows. There she stands today, looking as fine as the day she moved in, thanks to a group of UCRS members who keep her in order. We have wired the engine so that all lights shine at night, and during exhibition periods a small air-compressor rings a bell."

Locomotive seen in CN's diesel shops at Edmonton, Alta., has "Mountain" lights for better vision while rounding curves. All photos on these two pages by James A. Brown

In time, Jim became involved in the Society's steam excursions, powered by CN 6167, a 4-8-4—too much involved, he now thinks. He organized nearly a dozen fantrips, ranging from 120-mile one-day outings to an 840-mile weekend affair to Ottawa and North Bay.

"Last spring we sponsored a day-long steam trip, free for underprivileged children from local settlement houses. It was fun, but the combined energy of 600 kids nearly drove us wild. When the CN retired its 6167 last September, replacing her with the rebuilt 6218, our Society marked the event with two doubleheaded excursions. Yes, it's a lot of fun."

But there's a fly in the ointment. "In the matter of excursions," Jim tells us, "I am sensitive to criticism. I doubt if many passengers on our trains realize the immense amount of advance planning that goes into a special train movement. I mean such details as negotiations with the railway, the preparation of advertising, train handouts, and publicity, the scheduling, run-past scouting, and ticket-selling—seemingly endless phone calls, letters, and hours of conscientious labor. All these items help to make the operation a success.

"Should anything go wrong, the excursion director is automatically the man to blame. Part of the blame is mine, I suppose, for becoming too embroiled in the preparations. Ideally, each function should be farmed out to a separate individual. However, if I have an idea how a thing should be done, I usually end up by doing it myself rather than spend the time explaining to someone else how to do it.

"When the pressure of details is extra heavy, I'm likely to get edgy and snap at the fellow who complains about a run-past location or a coach in which the air-conditioning doesn't work. But mostly I find the trips enjoyable. It gives a sense of satisfaction to watch happy people—of which Sy Reich is occasionally one—leave our train after a successful day."

In 1960 Jim Brown corresponded with the CP regarding the possible purchase of a surplus official car. Nothing came of it at the time; but in September, 1963, the CP offered the Society a wooden car that formerly operated on the Dominion Atlantic in Nova Scotia. Jim managed to negotiate Toronto storage space for it on CN prop-

erty; and the car, painted royal blue and lettered *Nova Scotia,* now rests in dignity behind the roundhouse that shelters the 6167 and 6218. The UCRS has used it on a few trips, thus making it the first Canadian-owned private car to operate for many a year.

But Jim is irked by the habits of some fans. "For example, the character who acts boorishly, especially on excursions, having little regard for those about him. He may make unreasonable demands of railway officials, thus breaking down the rapport that the rest of us are trying to build up with these people. Another type that doesn't rate highly with me is the fan who tries to sell railroadiana to his fellow enthusiasts at vastly unreasonable prices."

As a photographer, Railfan No. 27 does all his own black-and-white processing and printing. His Rolleiflex and a Topcon single-lens reflex (for color) are mounted on a bracket so he can shoot color and b&w simultaneously. He and Ann are also hi-fi fans and lovers of classic music. Last year, through a little conniving, the family car carried license plate 6167, an obvious reference to a certain CN locomotive.

Jim has a rather large collection of employees' timetables, rulebooks, and mechanical data for Canadian lines. Also about 6000 negatives, of which perhaps 800 have been acquired by trade with other photographers. In addition, he has a large collection of photos and slides, and is accumulating HO gage models of Canadian prototype locos to use in a model layout when he has a basement in which to set it up. He and Ann are doing some serious house-hunting these days for a home with such a basement.

They live in Toronto at 36 Thorncliffe Park Drive, sharing Apt. 301 with a cat. Jim and Ann like animals, all kinds, so much that they never go hunting or even fishing. Both are non-smokers and non-drinkers.

Jim's pet peeves include "excessive commercialization, the fact that 'most everything centers around the almighty dollar; writers of movie scripts who ruin the film versions of good novels by injecting thin love plots, and politicians who make stupid statements about railways or rapid transit without first checking on the facts."

This year he is lessening his club activities and devoting more time to old-fashioned railfanning on his own—taking pix and "just watching"—and will write a few articles for the UCRS *Newsletter.*

Says he: "I can't agree with those who claim that all the romance of railroading died with steam power. Much did, of course, but I find it fascinating to keep up with diesel development. And apart from motive power, look at CN's revitalized passenger business, the new specialized freight equipment, new signaling and control techniques, and so on. Many UCRS members show increased interest in these things. After all, if the railfan movement is to thrive, it must keep up with the times." •

Jim's blue-eyed wife, Ann, whom he met for the first time on a Toronto subway platform, fishes their bewildered cat, known as Mr. Mipps, out of the bathtub into which it fell. Ann makes most of her own clothes, is a good cook, and likes fantrips but isn't a railfanette.

Canadian National's *Super Continental* stops at Wainwright, a prairie village.

Steam-smoke pattern: CN 6167 returning from an excursion of the UCRS.

No. 5146, Baltimore Transit Company, at Eastern Avenue and Haven Street.
William Hoffman, II
326 S. East Ave., Baltimore, Md.

THE FRENCH Government is building a new subway for Paris, to run between Saint-Germain-en-Laye, 12 miles northwest of the French capital, and Boisey-Saint-Leger, 10 miles southeast of the big city. This line is expected to be completed in 1975.

Steve Maguire

It is an ambitious project, designed to link growing suburbs by means of existing rail lines and a new tunnel under the center of the city.

Paris authorities have evolved a master plan to provide transportation for a metropolitan area that is expected to grow from a population of 9 million today to 14 million by the year 2000. The new line is the chief east-west axis of the plan.

Already the Paris subway network is so dense that the new tunnel will have to be placed well below existing ones. Engineers estimate that at some points it will have to go deeper than 200 feet.

The new line will be able to carry 50,000 persons in each direction every hour. The average daily pasenger flow is expected to be from 600,000 to 800,000.

As this line is intended to discourage suburbanites from driving cars into the traffic-choked city center, each suburban station will have a large, free parking lot.

Later, Paris will have still another subway, this one running north and south and also linking up with suburban rail lines. It is in the planning stage. Work on it is expected to begin in 1970, with completion scheduled in 10 years.

CHICAGO'S Lake rapid-transit route is now operating most of the 180 "new look" air-conditioned cars that Chicago Transit Authority ordered from Pullman-Standard, thus giving the passengers faster service. During the peak hours, riding time is cut by 2½ minutes on the one-way trip between Harlem terminal in Oak Park and the Loop. In off-peak hours the saving is 3½ to 4 minutes.

The new equipment assigned to the Douglas-Milwaukee route is operated as six-car trains during morning and evening weekday rush periods and as two-car trains on Saturdays, Sundays and holidays. Excess cars are used on the Congress route in off-peak days and nights.

Last November 11th the CTA's Skokie Swift set a new ridership record of 6,804—an increase of 418 over the line's previous high, October 16th. The line uses ten rapid transit cars. Since October, two of the CTA articulated units, formerly 5000's, renumbered as 51 and 52, have been in service on this line, where their additional passenger capacity has been utilized to provide more seats.

CONSTRUCTION that begins this spring on extensions of Philadelphia's Broad Street subway at both ends is expected to be completed on the southern end by 1967 and to the north by 1969. Costs will be paid by an $87 million bond issue that the voters approved last November.

The new southern trackage will bring the underground line from Snyder to Pattison Avenue, while on the northerly end trains will leave Broad Street to run under Hunting Park Avenue and Roosevelt Boulevard to Adams Street, where they will emerge from a gopher hole, so to speak, to roll above ground on a median strip of the proposed Northeast Freeway to a Rhawn Street terminal.

We are kept posted on these developments by Art Munson, 25 Hillside Rd., Levittown, Pa. Changing the subject: Art reports that 20 more electric *Silverliners* will be delivered to the Pennsylvania Railroad this year and that the Pennsy and the PSIC (local commuter authority) have requested bids on prices for 144 more such cars for suburban service.

ALTHOUGH some of us had hoped and the Pittsburgh Port Authority would take over the Pennsy's commuter service in the Pittsburgh area, PA actually let the last 19 such trains make their final runs November 27th, alleging that those trains did not have the growth potential to justify the enormous cost of developing and operating them as a modern rapid transit system. The Authority, reports Jim Cerny of Pittsburgh, cited the low patronage of the said trains—only 1,175 daily riders—which it said that deluxe buses could handle and even offered to operate a bus service between the big city and its northern suburbs.

WE WONDERED in December *Railroad* "what happened to all those people who, years ago, proclaimed loudly that elevated railways were outmoded and decreased property values." Says Jim Crimmins, 5 Bonnie Dr., Exeter, N.H.: "I think you will find them today in Boston, Mass."

For a long time some people have been trying to have the "unsightly" elevated rapid transit structures removed from Boston streets. An elevated motor highway, built through the city, required removal of many buildings. At Dewey Square the expressway goes underground for a short distance.

"Now the cry is to get rid of the el

Dale Budd, Mosman, N.S.W., Australia
Vacuum-cleaner car, still in the experimental stage, runs in Melbourne, New South Wales, Australia; weighs about 30 tons, has 12 wheels, and is locally called "the All-Day Sucker."

Tramcar No. 1111, 53 years old and out of Sydney public service since 1959, runs on museum line of South Pacific Electric Railway, which parallels for a short stretch the Royal National Park branch of New South Wales Government Railways. Normally, the branch is worked electrically but on this occasion a steam locomotive more than 80 years old is operating over it.
Photo from "Trolley Wire" (South Pacific Electric Ry. museum monthly magazine)

structure from South Boston to Forest Hills," Jim goes on, "also to remove the trolley viaduct near North Station and the el structure in the Charlestown district."

There is some talk of a monorail from Hingham to South Station and even extended to the new Government Center now being built a mile or so north of the station."

THE FREIGHT trolley line at Ponemah Mills, Taftville, Conn., is abandoned and all overhead and poles have been taken down, laments Norton Clark, 21 Endicott St., Newton, Mass., after visiting the plant where the last non-museum trolley operated in Connecticut. Both trolley locomotives, including a very old GE motor, were donated to the American Museum of Electricity at Nishayuna, N.Y., and are now on display there.

SAN FRANCISCO cable-car lines, which were to have been shut down for repairs in December, actually ran during the 1964 Christmas season because two gear-wheels being manufactured in Germany were not ready for shipment, reports Ralph Kerchum, Oakland, Calif. The lines will be closed at a later date.

Trolley Museum News

AUSTRALIA saw its first new trolley-museum electric service last July 19th, when ex-Sydney tramcar 154 was operated on a short piece of museum trackage in the Royal National Park at Loftus, about 20 miles south of the center of Sydney, reports Ken McCarthy, 155 Parkside Dr., Dapto, N.S.W., Australia.

Museum trackage parallels a branch of the suburban electric system out of Sydney. Although only one-third of a mile of track is now operable, there will soon be 1½ miles. A car barn, already erected, holds the museum tramcars and a small motor generator set provides several hundred volts power.

The Sydney museum dates from formation of the Australian Electric Transport Museum in 1955. Construction began in 1956. Then in 1958 the present cooperative society was formed, South Pacific Electric Railway, Box 103, G.P.O., Sydney, N.S.W., Australia, which publishes an illustrated 20-page bulletin bi-monthly.

OLDEST operating streetcar has been acquired by the British trolley museum at Crich, Derbyshire. Last October this car returned to England, where it was built in 1873. It spent 86 years in service on the Oporto Tramways in Portugal, where it started as a mule-car, later running behind steam trains and then behind electric cars on the city system. An old firm in the port wine trade arranged for its shipment back to England with a cargo of wine and paid the shipping cost.

BLOOMSBURG, Pa., may shortly see a new trolley operation using the body of one of its own trolleys, No. 10, that ran on the North Branch Transit Co. line to Danville and Berwick, Pa., until abandoned in 1926, writes Andrew Maginnis, 38 Harvey St., Philadelphia, Pa.

The car body, in fine condition, had been used under cover as part of a home in South Williamsport, Pa., until Ed Blossom acquired it recently. Electrical equipment and trucks were ob-

Car 5 (Brill) on meter-gage track of Piracicaba Municipal Transport in Brazil.
All photos on this page by Allan H. Berner, 871 Aberdeen Rd., Bay Shore, N.Y.

U.S.-built trolleys in barn of Rio Grande do Sul Municipal Transport, Brazil.

One of the English-built cars of Santos Municipal Transport Service, Brazil.

Ex Worcester, Mass., car now works for Porto Alegre Transit Company, Brazil.

tained for the body from New Orleans. With the aid of Harry Magee of Bloomsburg, it is being restored for local operation.

Brazilian Trolley Lines

SEVERAL interesting trolley lines in Brazil were visited by Allen H. Berner, Bay Shore, N.Y., who told us something about his recent South American tour in last month's department. Southbound from Rio de Janeiro to Sao Paulo on the Central Railroad, he found at Campos de Jordao a 35-mile interurban that resembles the mountainous traction lines of Switzerland.

Between terminals at Pindamonhangaba and Emilio Ribas, it ascends to a higher altitude than any other Brazilian railroad and runs along a scenic route on some steep grades. German-built interurban cars and freight motors are used, and Campos de Jorado has local service also. In recent years at least it built two streamlined home-made interurban cars. Allen thinks this line will continue to run for a long time.

In Sao Paulo, a large modern city, the municipal transit system is slowly motorizing its remaining trolley service. The latter exists under dense congestion, including operation in the street running against vehicular traffic on most of the downtown lines. All of the city's open cars and trailers, except on the short Belem route, have been retired. A rapid transit system at Sao Paulo has been under consideration for many years but no one seems willing to start spending money to build it.

Trolleys serve three smaller cities, each about 50 miles from Sao Paulo but in different directions. Santos, to the east, has a large system, even bigger than Sao Paulo's, and operates both open and closed cars. Among the unusual types are articulated open cars with railroad-type roofs. All cars have bow trolleys. Allen Berner observed some trolleybus wire being put up and the stoppage of new car-building in the shops, so he concludes that the Santos system may soon convert to buses.

Northwest of Sao Paulo is Campinas with a large system of 12 car lines, all with open trolleys. Many cars are Brill-built. Cars and track are well maintained but here, too, there is much running against downtown street traffic, as in Sao Paulo.

Piraciba, a small city west of Sao Paulo, has a little municipally-owned streetcar system of three lines and only five cars, all open. Two of the lines have no turnouts and each is served by a single car. The third line, with one turnout, uses two cars. The trolleys crawl along, with headways averaging a half-hour. It is puzzling, Allen says, how this system exists. The 50-year-old cars are costly, expensive to operate,

Lake Shore Electric car 1812 (built by Jewett in 1918) was photographed at Beach Park, Ohio, depot in 1936.
C. W. Jernstrom
822 Pelham Dr., Fort Wayne, Ind.

not to mention the cost of maintaining track and wires.

Farther south, Porto Alegre Transit Co. serves as the backbone of transit in the large city whose name it bears. More than 100 closed trolleys (most of them second-hand from the U.S.) run on at least a dozen routes, with several cutbacks and multiple routings. Though most cars have had ends rebuilt in apparent modernization attempts, cars from Miami, Eastern Massachusetts, and Worcester, Mass., can be seen. In fact, the Worcester cars are still in original condition. There are also several cars with Cincinnati curved sides and two master units identical with those that ran in York and Allentown, Pa., long ago.

The system being standard gage, second-hand cars could easily be put into service on arrival from the U.S. Moreover, all Porto Allegro cars use trolley poles, air whistles, and bells. All track is double, and cars run only on city streets.

At the extreme southern tip of Brazil, in Rio Grande, a small municipally-operated trolley system survives with closed cars running on four lines, while several other routes appeared to have been recently abandoned but were still intact. The policy seems to be to run as many lines as can be served by operable cars, and as the cars wear out the lines are abandoned. Allen saw a few open cars and trailers in the barn, obviously retired.

The equipment in service, painted green, consisted of four-wheel Brill cars, except for a single Birney with rebuilt wooden ends. (According to Dr. Harold Cox of Forty Fort, Pa., who is writing a book on Birney cars, this one was bought from United Electric Rys. of Providence, R.I.) During Allen's trip south from Rio, his train crossed a trolley line with which he was unfamiliar, apparently a suburban operation out of Aparecida, Brazil. Who can tell us about it?

Electric Publications

ELECTRIC traction history has been revised by Rev. Homer Benton, an Army chaplain living in the Puget Sound area. An article he wrote for the *Electric Traction* Quarterly gives reliable evidence that the first interurban line built anywhere—also the first one to be abandoned—was the short-lived, 11-mile Fidalgo City & Anacortes Electric Railway that ran on Fidalgo Island in the State of Washington.

That line, built by the Thomson-Houston-Electric Co. as part of a real estate promotion, was opened March 29, 1891, with four cars constructed by

Britain's trolley museum at Crich in Derbyshire has just acquired world's longest-serving streetcar, a horsecar built in Birkenhead, England, and operated 86 years in Portugal. Picture shows it returning to England in 1964.
J. H. Price, 15 Kingslyn Crescent, London, England SE 19

Northern Car Co. of Minneapolis, Minn. From the start, power and transmission difficulties plagued it. A bond issue that would have finished the powerhouse and revamped the electric feeder system failed; so in April, 1892, the company closed down the line and shipped its trolleys and machinery by steamer to the Seattle streetcar system.

Thus, in one year, the first inter-city trolley line had opened and closed, never to be re-activated. It pioneered the first use of double-trucked cars and the longest transmission trolley line yet built in the Northwest. The same issue of the *Quarterly* also carries a history of the Oshawa Ry. and an account of a wreck on the Chicago, Aurora & Elgin. It may be had from James D. Johnson, P.O. Box 52, Wheaton, Ill., for $1.25 a copy.

Several deluxe editions of articles appearing in past issues of THE WESTERN RAILROADER monthly are offered in cardboard binding with staples, each 6x9", illustrated. THE MILWAUKEE ROAD ELECTRIFICATION, 45 pages, $1.50. PETALUMA & SANTA ROSA ELECTRIC R.R., 36 pages, $1. SAN FRANCISCO MUNICIPAL RY. MERGER OF 1944, 25 pages, $1. EARLY-DAY TROLLEYS OF THE EAST BAY, 38 pages, with many old views, $1. STREET RAILWAYS OF EUREKA, 24 pages, 50 cents. OCEAN SHORE RAILROAD, part steam, part electric, 32 pages, $1. MODESTO & EMPIRE TRACTION, steam road that had a battery car, 32 pages, $1. Send orders to THE WESTERN RAILROADER, P.O. Box 668, San Mateo, Calif.

A set of three booklets is offered by Light Railway Transport League: THE TRAMWAYS AND LIGHT RAILWAYS OF GENOA, 22 pages; RAILS THROUGH THE SHORE AND WYNA VALLEYS, SWITZERLAND, 26 pages, and THE RIGHT LINES TO THE SUBURBS, 8 pages of modern transit operations in U.S. and on the Continent. Each is illustrated. All three sell for $1 ($1.30 if paid by check) sent to J. Barrie, 21 Endymion Road, London N.4, England. ●

Stephen D. Maguire, P.O. Box 51, Belmar, New Jersey

***Redbird*, No. 501, ex-Columbus, Delaware & Marion Ry., now belongs to the Ohio Railway Museum in Worthington, Ohio, where you see it being rehabilitated.**

THE WRECKING MASTER

A Fiction Classic by Frank L. Packard

OPINIONS, right or wrong, are a matter of individuality—there have been different opinions about Joe Flannagan on the Hill Division in the Canadian Rockies. But the story is straight enough. From car tink to superintendent, there has never been a difference of opinion on that.

Flannagan was the wrecking boss. Tommy Regan, the master mechanic, said the job fitted him, for it took a hard man to do that work; and Flannagan, bar none, was the hardest man on the payroll.

He was hardest at crooking elbows in MacGuire's Blazing Star Saloon on Railroad Avenue, hardest with his fists, and hardest of all when it came to getting at the heart of some scalding, mangled horror of death and ruin on the iron road.

And he looked it. He stood six feet one in his stockings, with chest and shoulders like the front-end view of a sturdy, well-grown ox. He wasn't pretty. His face was scarred with cuts and burns enough to stall any German dueling student on a siding till the rails rusted, and the bushy beard he grew to hide these disfigurements just naturally came out in tussocks.

His eyes could go coal black and lose their pupils and his shock of black hair fell into them half the time; also, he had a tongue that wasn't elegant. That was Flannagan — Joe Flannagan, wrecking master.

There's no accounting for the way some things come about, and it's pretty hard to call the turn of the card when Dame Fortune deals the bank.

One night, coming back from a bit of a spill up the line, Flannagan growled and swore because they had stalled him and his wrecking outfit for an hour about half a mile west of Big Cloud—the reason being that a circus train in from the East, billed for a three days' layover at Big Cloud, had temporarily choked the yards, already glutted with traffic. Flannagan was dirty and very tired, and quite sore.

Finally they gave him the "clear," and his flat and caboose and his staggering derrick rumbled sullenly down toward the roundhouse and shops.

The sight of gilded cages, gaudily decorated cars, and converted Pullmans that were second-class-tourist equipment painted white, did not assuage his feelings. Neither was there enchantment for him in the roars of wild beasts nor the hybrid smells that assailed his nostrils from the menagerie.

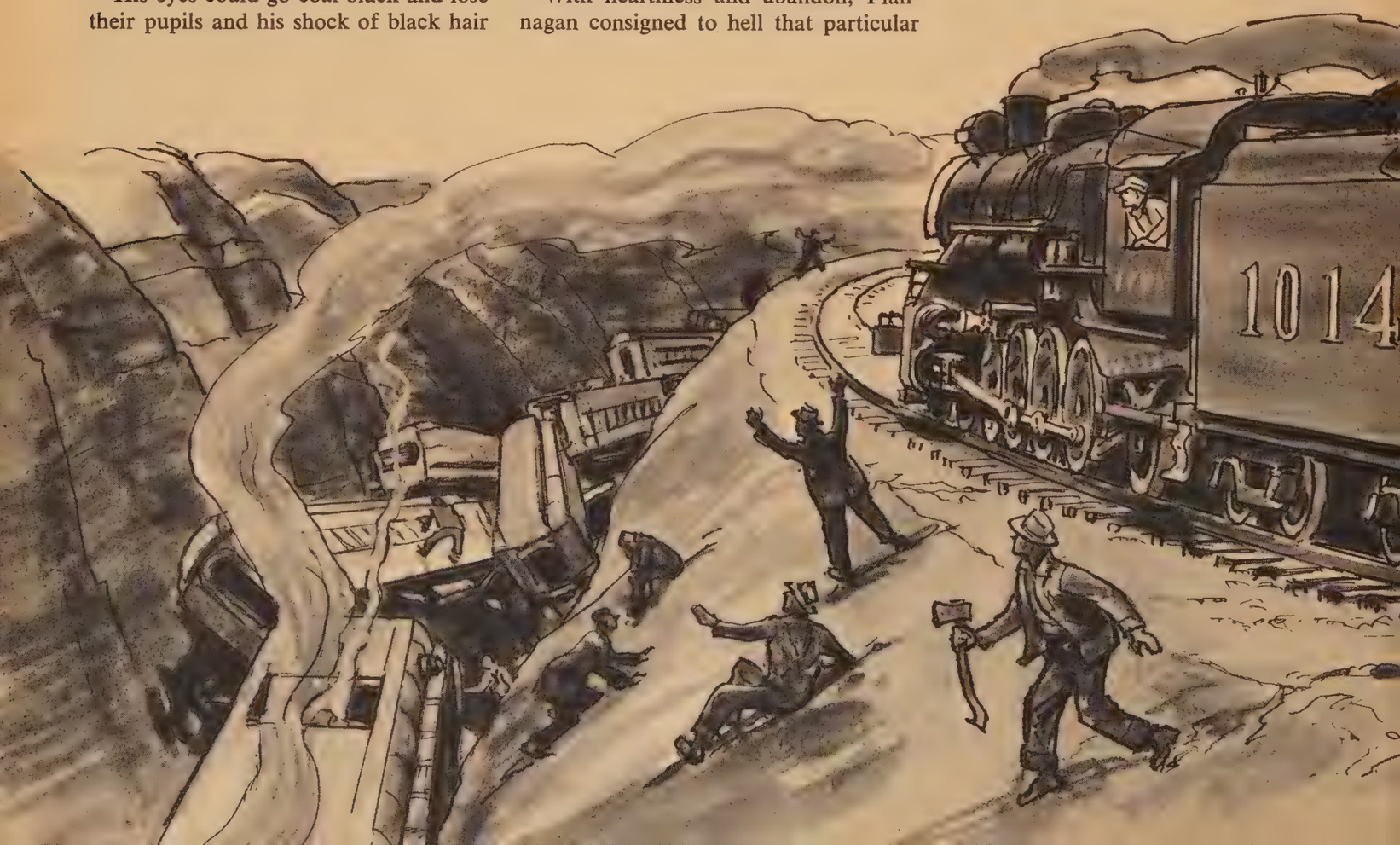
With heartiness and abandon, Flannagan consigned to hell that particular circus and everything thereunto pertaining, from fangless serpents to steam calliopes. Yes, even including the trim, brown-eyed, brown-haired Daisy MacQueen who stood at the door of one of the coaches grinning at him.

Opinions differ. Flannagan was about the last fellow on earth whom anyone on the Hill Division would have picked for a marrying man. Also he was reputed to be about the last whom a pretty girl would *want* to marry. But the Hill Division was wrong on both counts.

With her, maybe, it was the strength of the man, since they say that comes first with women. With him, maybe, it was just the mischievous little figure that could ride with the grace of a fairy. Anyway, it came as sudden as a head-on smash around a ninety-degree curve. Such was Flannagan's way, for the big wrecking boss was impulsive and when he wanted a thing he usually got it.

That night Joe cursed the circus. The next day he saw Daisy MacQueen again, riding in the street parade. But this isn't the story of Flannagan's courtship. Not that the courtship wouldn't be worth telling, only there are other things.

At first Big Cloud winked and chuck-



led slyly. Then, when the circus took down its tents and left and Flannagan got a week off and left with it, the town guffawed outright. But at the end of that week, when he brought back Mrs. Flannagan—*nee* Daisy MacQueen—Big Cloud wagged its head and waited developments. This is the story of those developments.

MAYBE that same impulsiveness of Flannagan's, coupled with a passion that was like a devil's when aroused, was to blame. Possibly the women of Big Cloud had something to do with it, following the lead of Mrs. Harry Malone, wife of one of the hogheads and a leader in society circles, who turned up her Celtic nose disdainfully at Daisy MacQueen. Maybe Daisy had pride.

At any rate, tongues wagged, and the big wrecking boss listened.

Once for all, let it be said and understood that Daisy MacQueen Flannagan was as straight as they make them. Daisy hadn't been brought up the way Mrs. Malone and her coterie had. She liked to laugh and play. She liked to *live,* not merely exist in a humdrum way over wash-tubs and a cook stove—though, all credit to her, Daisy never shirked one nor the other.

The Big Cloud women's ideas about circus performers were, putting it mildly, puritanical; but the men liked Daisy MacQueen and took no pains to hide it. They clustered around her and, before long, she ruled them all imperially with a nod of her pretty head. As a result, the women's ideas became even more rabid — which is human nature, Big Cloud or anywhere else.

At first Joe was proud of his little wife. But as months went by, gradually the wagging tongues got in their work, Flannagan began to listen, and the jealousy that was his by nature began to smolder into flame.

A mean feeling directed against no one in particular. Just jealousy. Things up at the modest house off Main Street, where the Flannagans lived, weren't as harmonious as they had been.

In the beginning, Daisy, not treating the matter seriously, answered her husband with a laugh. Eventually she answered him not at all. The stage was reached where only a tiny spark was needed to bring matters to a head.

Perhaps there was justice in Flannagan's cursing of the circus, for in time the big top supplied that spark. Not that the show ever came back to town — it didn't — but Signor Ferrangi did.

Ferrangi the ringmaster was round, ferret-eyed, pompadour-haired, waxed-mustached, and perfumed. Moreover, he was a scoundrel. What he got he deserved; no doubt about that.

One night Flannagan, walking into the house, saw Ferrangi on his knees before Daisy, and heard the ringmaster's impassioned, flowery words. In a blind fury, Joe failed to note the scorn in Daisy's eyes or the significance of her rigid little figure with tight-clenched hands.

Ferrangi had previously been in love with Daisy. Flannagan knew that, and

his seething brain remembered that. The circus people had told him so; Daisy had admitted it; Ferrangi had told him so with a snarl and a threat—and he had laughed, *then*.

An instant the wrecking master hung upon the threshold. He was not a pretty sight. Back from a pile-up, he was still in overalls, smeared with blood—four carloads of steers had gone into premature shambles in the ditch.

One instant he waited, his face working convulsively, and then he jumped. His left hand locked into the collar of the ringmaster's coat and his arm straightened like the tautening chains of his own derrick crane.

As the circus man came off his knees and upright from the yank, Flannagan's right swung a terrific full-arm smash. It landed a little above the jaw, plastering one side of the waxed and curled mustache flat into the fop's cheek.

Ferrangi's answer, as he wriggled free, was a torrent of malediction, a pistol in hand, and a blinding flash. Daisy screamed. The shot missed, but the powder singed the big man's face.

IT was the only shot fired. Joe gave a roar, high-pitched like the trumpeting of an elephant gone amuck. Then with a single blow he sent the revolver sailing ceiling high, and his arms, like steel pistonrods, worked in and out, drumming a merciless tattoo upon the ringmaster.

Smoke from the shot filled the room with pungent odor. Chairs and furniture, overturned, broken, crashed to the floor. Daisy crouched against the wall, hands clasped to her breast.

Before Flannagan's eyes all was red. A battered form curled up suddenly into a heap at his feet. Joe's groping hands reached for it.

Just then, with a rush, many other forms came between him and what was on the floor. This intervention saved Ferrangi's life.

Neighbors lifted the stunned ringmaster to his feet. Flannagan brushed his great fist across his eyes in a half-dazed way and glared at the roomful of people.

"Get out of here!" he bellowed.

There were men in that group, and three or four women, Mrs. Malone among them. They knew Flannagan, and they went out half carrying and half dragging the ringmaster.

"Get out!" the big man roared again to hurry them, and as the last one disappeared he whirled on Daisy. "You, too! Get out!"

White-lipped, she eyed him coldly. "You dare to —"

His hand dove into his pocket, and its contents, bills and coins, what there was of them, he flung upon the table. "Get out," he repeated in a lower tone, "as far as all I've got will take you!"

Pawela, Mach. 4—9/11 Times Roman

Daisy was proud. Her big brown eyes had a hard light in them and her words came icy as death: "Some day, Joseph Flannagan, you'll wish you hadn't said that."

Halting in the doorway he flung back: "I'm lettin' you down easy. Go away from Big Cloud before I get back. Number Fifteen'll be in in an hour. You'd better take it."

Flannagan stepped out on the street. A curious little group had collected two houses down in front of Mrs. Malone.

The wrecking master glanced at them, muttered a curse. Then, with head down between his shoulders and clenched fists rammed in his pockets, he headed in the other direction.

FIVE minutes later he pushed open the swinging doors of the Blazing Star and walked down the length of the room to where Pete MacGuire, the proprietor, lounged across the bar.

"Pete," he said, "next Tuesday's pay day. Is my face good till then?"

MacGuire looked at him curiously. The news of the fracas had not yet reached the Blazing Star.

"Why, sure," said he. "It sure is, Joe. Anytime."

"Then let 'em come my way," Flannagan rapped out, "an' fast."

Regan, the master mechanic, had called Joe a hard man, and he was—a product of wild, rough, pioneering life. What he did that night was nobody else's business.

The wrecking boss let go his hold, not at once, but gradually. That night spent in the Blazing Star was the first of many that followed. Daisy had gone—where, he did not know, and he told himself he did not care. He grew sullen and uncompanionable.

Big Cloud took sides. The women argued for Flannagan, the men for his wife. Flannagan himself hated the women, avoided the men, and went to the Blazing Star.

Then came the inevitable result. Regan, kindly for all his gruffness, stood between the wrecking boss and Superintendent Carleton, and warned the huge fellow oftener than most men were warned on the Hill Division.

Nor were his warnings totally wasted. Flannagan would steady up, temporarily, maybe for a week; then off again. Steady up just long enough to keep putting off and postponing the final reckoning.

One afternoon, some six months after Daisy had gone away, the master mechanic addressed him harshly: "I'm through with you, Flannagan. Understand? Next time you'll talk to Carleton, and what he'll say won't take long."

A week after that Flannagan cut loose again. He made one wild night and a day of it, and then another. Some of the boys finally got him home, dumped him on his bed, and left him to his reflections, which were blank.

The big man slept it off in about eighteen hours. When he came to himself his head felt as though a gang of boilermakers were driving rivets in it. He took a bracer and went back to bed.

This improved his physical condition, but when he arose late in the afternoon any improvement there might have been in his mental state was soon gone.

Flannagan found a letter shoved under his door, postmarked the day before, and with it an official manila envelope from the super's office. One was personal, the other business.

He opened the letter and read it. Then he read it again and, with an oath, tore it savagely into shreds and flung them on the floor. The official manila he did not open at all. A guess was enough for that; probably a curt request to present himself in the super's office. Flannagan grabbed his hat and started down for the station.

THERE was no idea of shirking. Flannagan wasn't that kind, and just now his mood, if anything, spurred him on rather than held him back. He welcomed the prospect of a row.

Carleton's office was upstairs over the ticket office and next to the dispatcher's room. Flannagan reached the depot, climbed the stairs, and pushed open the door with little ceremony.

"You want to see me?"

Carleton, sitting at his desk, looked up at the wrecking boss.

"No," he said curtly. "I don't."

"Then why in hell did you send for me?"

"See here, Flannagan," snapped the super, "I've no time to talk to you. You can read, can't you? *You're out!*"

Flannagan blinked. "Was that what was in the letter?"

"It was," said Carleton. "Now go! You've had more chances than any man ever got before from me, thanks to Regan; but you've had your last, and talking won't do you any good now."

Flannagan stepped nearer the desk.

"Didn't I tell you I never read your damned letter? Didn't I, eh, didn't I? D'ye think I'd crawl to you or any man for a job? I'm out, am I? D'ye think I came down to ask you to take me back? I'd see you rot first! T' hell with the job!"

Few men on the Hill Division ever saw Carleton lose his temper; it was not the super's way of doing things. He didn't lose it now, but his words were like trickling drops of ice water.

"Sometimes, Flannagan," he said, "to make a man like you understand, one has to use your language. You say you'd see me rot before you asked me for the job back again? Very well! I'd *rot* before I gave it to you, after this. Now, will you get out—or be thrown out?"

For a moment it looked as though Flannagan were going to mix it there and then. His eyes went ugly and his fists doubled into knots.

Carleton was afraid of no man or any aggregation of men. With face stern-set and hard, he leaned back in his swivel chair and waited. A tense minute passed. Then Flannagan's better sense weighed down the balance and, without a word, he turned, went out of the room, and stamped heavily down the stairs.

It was half past five when Flannagan went out of the super's office. Ten minutes later he was lifting a bottle to fill his glass, but instead he slapped the bottle back on the bar of the Blazing Star with a sudden jerk. From down the street in the direction of the yards boomed three long blasts from the shop whistle—*the wrecking signal!*

AGAIN and again it came. Men around him began to move. Chairs from the little tables were pushed hurriedly back. The bell in the English chapel took up the alarm.

It stirred the blood in Flannagan's veins. He turned from the bar and stopped like a man stunned. The call was not for him, not any more.

Quick-running steps came up the street. The swinging doors of the Blazing Star burst open and a callboy shoved in his head.

"Wreckers out! Wreckers out!" he bawled. "Number Eighty's gone to glory in Spider Cut. Everybody's killed!"

In an instant he was gone, a grimy-faced harbinger of death and disaster. Gone, speeding with his summons to wherever men were gathered throughout the town.

Flannagan stood motionless. Then the glass slid from his fingers and crashed into tinkling splinters on the floor. The liquor splashed his boots.

Number Eighty was the eastbound Coast Express. Joe Flannagan stumbled toward the door. Men looked in amazement, standing aside to let him pass.

Something was tugging at his heart, beating at his brain, impelling him forward. He passed out through the doors and then a cry rang from his lips. There were not uncertain steps now. Men running down the avenue called as he sped past but he did not answer them.

He gained the platform and raced along it. Shouts came from across the yards. Up and down the spurs fluttered the yard engine, coughing sparks and wheezing from her exhaust as she bustled the wrecking train together. Lamps swung and twinkled like fireflies, for it was just opening spring and the dark fell early. In front of the roundhouse the 1014, blowing hard from her safety under a full head of steam, was already on the table.

WITH a heave of his great shoulders, Joe won through the group of trainmen, shop hands, and loungers clustered around the door, and took the stairs four at a leap.

A light burned in the super's office but the voices came from the dispatchers' room. And there in the doorway Flannagan halted for a second while his eyes swept the scene before him.

Regan, the master mechanic, by the window, was swearing as men do in times of stress. Spence, the dispatcher, was whitefaced, with hair straggling into his eyes. He was leaning over the key under the green-shaded lamp, over the key clearing the line, while the sounder clicked in his ears of ruin and of lives gone out.

Harvey, the division engineer, was there, too, pulling savagely at a brier with empty bowl. And at the dispatcher's elbow stood Carleton, a grim commander, facing disaster. His shoulders were braced and bent a little forward as though to take the blow.

Into this tense group Flannagan stepped forward. "Carleton," he called out, and his words came like panting sobs, "give me back my job!"

It was no place for Joe Flannagan. Carleton's cup was already full to overflowing. Like a flash he swung on the former wrecking boss. His hand lifted and pointed to the door.

"Get the hell out!"

"Carleton," Joe stormed again, "give me back my job—just for tonight?"

"No!" Carleton's voice rang hard as flint. "I tell you, NO!"

Harvey moved suddenly, threateningly, toward Flannagan. But Joe brushed the division engineer aside like a plaything and sprang forward. With a quick, fierce grip, he caught Carleton's arms and pinioned them to his sides.

"And I tell you, YES!" Joe's voice rose dominant with the power, the will that shook him now to the depths of his turbulent soul. *"My wife and baby's in that wreck tonight!"*

In the background were turmoil, shouts, and the short, quick intermittent hiss of steam. The 1014, her cylinder cocks open, backed down to the platform. The clash of coupling cars and jumbled medley of sounds floated up from the yard without.

But within the little room the chattering sounder for the moment stilled and there fell a silence as of death, and no man among them moved or spoke.

For a long minute, in the twitching muscles of the big wrecker's face, in the look that man reads seldom in his fellows' eyes, Carleton drew the fearful picture and lived the awful story that the babbling wire had told. At length his voice broke.

"God help you, Flannagan. Go!"

NO word came from Flannagan's lips, only a queer choking sound as his hands dropped to his sides and he jumped for the door. On the stairs he passed Harry Malone, hoghead on the 1014, coming up for orders.

"Bad spill, I hear," growled the engineer as he went by. "The 505's pony truck jumped the rails on the lower curve and everything's in the ditch. Old Burke's gone out and a heap of the passengers with him. I—"

The wrecking boss heard no more; he was on the platform now. Coupled behind the derrick crane and the tool car were two coaches, improvised ambulances. Into these latter, instead of the tool car, the men of the wrecking gang were piling. A bad smash brought luxury for them.

A babel of voices were around him, but in his brain, repeated over and over again, lived only an excerpt from the letter he had torn to pieces that afternoon. The words were swimming before his eyes:

"Joe, dear, we've both been wrong. I'm bringing baby back on the *Coast Express* Friday night . . ."

Men with little black bags brushed by him and tumbled into the rear coach —all the doctors of Big Cloud. Engineer Malone came running from the station, his orders fluttering in his hand, and sprang for the cab.

The 1014's exhaust burst into quick, deafening explosions. Sparks shot up from her short stack. Soon the big

whirling drivers were beginning to bite. And then, through the gangway, after the hobhead, into the cab swung the wrecking master.

Spider Cut is the eastern gateway of the Canadian Rockies. It lies, as the crows fly, sixteen miles west of Big Cloud; but the right-of-way, as it twists and turns, dodging the buttes that grow from mounds to foothills, makes it on the blueprints 21.7.

Running time of the fast fliers on this stretch is—but what of that? Malone that night smashed all records. The medical men in the rear coach tell to this day how they clung for life and limb to their seats and to each other, and admit they were frightened.

As the wreck special, with a clash and clatter, clicked over the switches in the upper yard and nosed the main line, Stan Willard, who had the shovel end of it, swung open the firebox door with a snatch at the chain. A red glow immediately lighted up the heavens.

Malone wheeled in his seat and looked at the giant form of the wrecking boss behind him. They had told him the story in the office. And he had often heard his wife's version of the whole affair.

Eyes of the two men met. Flannagan's lips moved dumbly, and with a curious, pleading motion, he gestured toward the throttle. The hoghead opened another notch with a hard laugh.

"I *know*," he shouted. "I know. Leave it to me, Flannagan."

THE bark of the exhaust came quicker and quicker, swelled and rose into the full, deep-toned thunder of a single note. Notch by notch, Malone opened out the 1014. The powerful Mountain racer leaped forward, ever faster, into the night.

Now the headlight played on shining steel ahead; now suddenly threw a path of light across the short yellow stubble of a rising butte.

Malone checked speed grudgingly as they swung the curve. Just for an instant. Then into the racetrack they thundered again, with wideflung throttle.

It was mad work and in that reeling cab no man spoke. The sweep of the singing wind, the wild tattoo of beating trucks, and the sullen whir of flying drivers were in their ears.

Behind lurched the derrick crane, the tool car and the coaches. They writhed and wriggled, tearing at their couplings, bouncing on their trucks, jerking viciously as they took up the axle play.

Now they tore through a cut. Walls took up the deafening roar and echoed and re-echoed it back in volume a thousandfold. Now into the open; now over culverts, trestles, spans, hollow, reverberating—the speed was terrific!

Over the levers, bounding on his seat, Harry Malone sat tense and strained. He leaned forward, following the leaping headlight's glare.

Staggering like a drunken man to keep his balance, fireman Stan Willard watched the flickering needle on the gage. His shovel clanged and swung. In the corner, back of Malone, bent low to brace himself, Flannagan stared with never a look to right or left, stared through the cab glass to the right-of-way ahead—stared toward Spider Cut.

The story of that ride is the doctors' story; they tell it best. Malone made the run from Big Cloud to Spider Cut—21.7 miles of mountain iron — in nineteen minutes!

There have been bad spills on the Hill Division, but never a worse one than on that Friday night. The 505 had jumped the rails at the foot of the curve coming down the grade just east of Spider Cut, shot over the embankment and piled the *Coast Express*, mahogany sleepers and all, into splintered wreckage far below.

As Malone checked and with screaming brake-shoes the 1014 slowed, Flannagan leaped from the cab and dashed up the track ahead of the still-moving pilot. It was light enough. Too light!

The cars of the wreck nearest him—the mail and baggage cars—had caught fire and, fanned by the wind into yellow flames, were blazing like a huge bonfire.

Shouts arose from below; cries of anguish from those imprisoned in the wreck. Figures of the crew and passengers who had escaped were moving hither and thither, working as best they might, pulling others through shattered windows and doors.

Some were laying those who were past all knowing beside the long row of silent forms already tenderly stretched upon the edge of the embankment.

A man, with face cut and bleeding, came running toward Flannagan. It was Kingsley, conductor of No. 80. Joe grasped him by the shoulders and gazed without a word into his face.

Kingsley shook his head. "I don't know, Flannagan," he choked. "She was in the first-class just ahead of the Pullmans. There's no one come out of that car yet." He turned away his head. "We couldn't get to it."

"Couldn't get to it." Flannagan's lips repeated the phrase mechanically. Then he looked, and understood the grim significance of the words. He laughed hoarsely and went into the fight.

DETAILS of that night no one person knows. There in the shadow of gray-walled Rockies, the men—flint-hearted, calloused, rough and ready though they were — sobbed as they toiled. While the derrick tackles creaked and moaned, ax and pick and bar swung and crashed and tore through splintering glass and ripping timber.

What men could do they did, and through the hours Joe Flannagan led them. More than one dropped from sheer weariness, but ever Joe's great arms rose and fell, ever his mighty shoulders heaved, ever he led them on.

It was graying dawn before they opened a way to the heart of the wreck. The first-class coach that was once ahead of the Pullmans was *under* them now! Flannagan, gaunt, burned and bleeding, staggered toward the jagged hole that they had torn in the flooring of the car.

They tried to hold him back, but he shook them off and went. He found her there, found Daisy with a little bundle lying in the crook of her outstretched arm. She moaned and held the bundle toward him, but Joe had gone his limit; his job was done, the tension broke.

And then they worked their way to the far end of the car after him, those hard, grim-visaged followers of Flannagan. They found a man squatted on an up-ended seat, a woman with shining brown eyes beside him.

Death and desolation and huddled shapes were around, but Joe was dandling an infant in his arms, crooning a lullaby through cracked lips, crooning a lullaby to a little one long hushed already in its last sleep . . .

Malone would have plenty to tell his wife when he got home that night. ●

INFORMATION BOOTH

ASK BARBARA: Railroad questions are answered here by our research expert—as many as space permits. Top priority is given to subjects of general interest. Address Miss Barbara Kreimer, *Railroad Magazine*, 205 E. 42nd Street, New York, N. Y. 10017. No replies are sent by mail.

1 *Where is the highest point on any common-carrier railroad?*

La Cima, on the standard-gage Peruvian Central in South America, 15,848 feet above set level.

2 *The war news from Viet-Nam rarely mentions railways. What kind of rail system does Viet-Nam have?*

It has 794 miles of nationalized meter-gage railway with 85 steam locos, 29 diesel-electric locos, 6 diesel railcars, 10 gas-powered cars, 2 diesel switchers, 232 coaches, and 1,184 freight cars. However, some of this equipment may have been destroyed in the fighting.

3 *I recall reading that a freak accident destroyed part of a high trestle on the Northern Pacific about 60 years ago without killing any of the people who were riding a train that was wrecked at the time. Can you tell me anything about it?*

Yes. On Feb. 11, 1903, a snowslide toppled the famed S-bridge between Wallace and Saltese, Mont., in the Bitter Root Mountains. The bridge was over 100 feet high at the center and about 80 feet high at the accident scene. The only train on it was standing still at the time, and consisted of a snowplow, two engines on the head end, two passenger cars, a caboose, and a pusher engine on the rear.

About 7 a.m. an avalanche swept away that part of the trestle on which stood the rear trucks of one coach, the caboose in which 8 crew men were sleeping, and the empty pusher engine. The crew fell into deep soft snow, all unhurt except that one man broke his hip. The 8 or 9 coach passengers leaped through a window, likewise falling into deep soft snow far below, and all escaped injury.

Six diesel locomotives can be sanded in 20 minutes with this machine that the Atlantic Coast Line installed recently at its Waycross, Ga., Shops. The installation consists of a sand-storage tower, which is stationary, and a four-legged gantry crane moving on its own rails and straddling two tracks which are used for inspecting and servicing locomotives. The gantry has a movable sand hopper and it works fast.

4 *What is "The Official Railway Equipment Register"?*

It is a quarterly, issued in January, April, July, and October, containing about 900 pages with complete information on lengths, dimensions, capacities, reporting marks, serial numbers and mechanical designations of all freight cars operated in commercial service by railroads and private car companies in the U.S., Canada, and Mexico. Also lists freight connections and junction points of the railroads, serial numbers, and descriptions of special type and heavy capacity cars, and serial numbers and dimensions of trailers and containers operated in TOFC and "Flexi-Van" service. Published by the Railway Equipment & Publication Co., 424 W. 33rd St., New York, N.Y., 10001, it sells at $5 a copy, $18 a year.

The same company also puts out *Railway Line Clearances,* annually in June, with circulars covering changes on individual railroads issued as received from these roads. Contains nearly 300 pages with lists of interline, system and through routes with clearances and weight limitations, plus local clearances, for railroads in the U.S., Canada, and Mexico. Also lists A.A.R. clearance recommendations and diagrams. Price, $3

a copy, postpaid, including the circulars.

Also issued by RE&P Co.—annually in March—is *The Official Register of Passenger Train Equipment* about 100 pages with complete information on length, dimensions, seating capacity, type of car, special features, car numbers, serial numbers or names and mechanical designations of passenger train car equipment that may be operated by railroads and private car companies in interchange service in the U.S. and Canada, $1 a copy.

But the best-known periodical of that general type is the monthly *Official Guide of the Railways and Steam Navigation Lines of the U.S., Puerto Rico, Canada, Mexico, and Cuba.* Besides timetables of the common-carier railroads, it includes maps of those roads, names and addresses of rr. officials, and information about the Association of American Railroads, ICC, Railroad Retirement Board, American Short Line Railroad Asso., Bureau of Information of the Eastern Railways, REA Express, Travelers Aid, Board of Transport Commissioners for Canada, etc. Also timetables of airlines and South American railroads.

This great book, now in its 98th year, over 1100 pages, sells at $4.50 a copy, $36 a year. We use it constantly in the *Railroad Magazine* office. It is issued by National Railway Publication Co., same address as RE&P Co.

5 *I've heard of double-deck and even triple-deck cars carrying new automobiles. Are double-deckers used for other freight?*

Yes. The Canadian National is experimenting wtih a double-deck livestock car that has three times the capacity of most livestock cars. This mammoth carrier will take a total of 80 cattle or 250 hogs on its two decks, each 55 feet long. Reputedly the largest car on the continent for moving beef cattle, it will be the prototype for future cars of that type if it proves acceptable to livestock shippers and stockyard operators. Triple-deck chicken cars have been used by railroads for many years.

6 *Were two-stack steam locomotives ever built, aside from the double-enders? If so, why?*

Yes. About 70 years ago Rogers built No. 6, the first of ten Consolidation types with two smokestacks, for the Toledo, Peoria & Western. The Texas Central also had such engines. The stacks were placed side by side in such a way that their exhaust pipes met at the base of the Y-shaped pipe. Each cylinder exhausted steam through both stacks. The nozzles were built flush with the horizontal sheet of netting. The purpose of double stacks was to give a more uniform draft through all the tubes than when only a central stack exhaust was used. The single stack had the heaviest draft through the middle tubes.

According to B. W. Warren, general foreman of the TP&W, who patented the two-stack draft equalizer, tests made in 1896 proved that it improved speed 3 percent and water evaporation 10 percent, besides reducing the use of coal by 8 percent per ton-mile.

Of course, there were objections to this arrangement. The two-stackers would not lift the smoke after the throttle was shut off. When drifting into town, the smoke would trail down along the car tops, unless a blower lifted it. On freights, when brakemen had to ride the car tops, the smoke from a two-stacker was uncomfortable and even dangerous.

7 *I see that the Mexican train wreck which killed 33 persons near Villahermosa last December 20th was blamed on the engineer falling asleep in his cab. Is that a common cause of train wrecks?*

No, but it's not unusual to blame a dead man. That Mexican train was running through heavy fog and rain; there is no proof that anyone in the cab was napping. Even so, Freeman Hubbard's book *Railroad Avenue* has a chapter on the world's worst circus-train wreck, which occurred at Ivanhoe, Ind., on the clear night of June 22, 1918, when Engineer Sargent passed a red signal, a flagman, and even a burning fusee thrown into his cab, because he had just taken some kidney pills which, physicians testified later at his trial, tended to produce unavoidable drowsiness. There were 68 deaths, including some world-famous circus stars.

8 *Did a private car ever run in the New York subway system?*

Yes, indeed. August Belmont, the financier who organized the Interborough Rapid Transit Co. to operate the subway, had such a car, No. 3344, named the *Mineola.* "Minnie" was the last word in luxury, with mahogany and teakwood paneling, picture windows, and a galley in which two stewards prepared dinners for Belmont and his guests with the aid of a steak broiler, chop grill, warming oven, and champagne cooler. For further details read E. J. Quinby's article, "Minnie Was a Lady," in our Feb. '56 issue.

9 *Why did the tenders of some Pennsy steam engines have small cabs on the back?*

The engines were pushers and the extra cab was for the brakeman.

10 *Where is the world's longest railway-station platform?*

India has the 4 longest: Khargpur, on the South Eastern Ry., 2,733 feet; Lucknow, Northern Ry., 2,474; Sonepur, NE Ry., 2,373, and Mehansa, Western Ry, 2,340. In fact, 10 of the 19 longest station platforms on earth are in India—we don't know why.

11 *Reprint the old poem entitled "Billy Richardson's Last Ride."*

Here it is, author unknown. Richardson, a Chesapeake & Ohio hogger, was killed by a mail crane.

Through the West Virginia mountains came the early morning mail;
Old Number Three was westbound, the fastest on the rail.
She pulled right into Hinton, a junction on the line,
With a Baldwin Mountain engine; they made the run on time.

Billy Richardson at Hinton was called to take the run,
To pull the fastest Mail Train from there to Huntington.
His fireman he reported for duty on the line;
Then reading their train orders, left Hinton right on time.

Then Billy told his fireman that he would happy be
If he could die while pullin' a train like Number Three.
"I want to die on duty right in my cab," said he,
"While pullin' east by Number Four on westbound Number Three."

The fireman then said: "Billy, you know you're old and gray,
Your name is on the pension list; you should retire some day.
But Billy said, "Dear fireman, the truth I'm tellin' you,
I must die right in my engine cab and nothin' else will do."

Then pulling down New River came westbound Number Three,
By Thurmond, then by Cotton Hill, no danger could he see.
His head then struck a mail crane, while rolling down the line;
He'll never take his train again to Huntington on time.

He pulled the fastest time freight, he pulled the U. S. Mail;
He pulled the fastest excursion to the music of the rail;
He lost his life on duty in his engine cab so free
While pulling into Montgomery on the westbound Number Three.

Now ladies, if your husband is a railroad engineer,
You know he is in danger and death is ever near.
You know he loves you dearly when he is by your side,
Remember well, that his next run may be his farewell ride.

12 *What is an articulated locomotive?*

A steam engine having two sets of

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A big event at Yakutat, Alaska: arrival of the Yakutat & Southern fish train.
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cylinders driving independent groups by wheels which support two sets of frames, joined by a hinge or pivot joint. The leading set of frames, cylinders, and driving wheels support the forward end of the boiler and swivel radially about the pivot connection, giving the effect of a truck, and this reducing the rigid wheelbase. In compound articulated locomotives, the usual arrangement is to drive the rear section by the high-pressure cylinders and the front section by the low-pressure cylinders. In single-expansion articulated locomotives all cylinders receive steam at boiler pressure. This information came from the *Locomotive Cyclopedia* for 1947. We often use that reference work.

13 *Some Northern Pacific track had rails marked "O.H. 72 lb. 302 P.S. Co. 1912 1111111." What does it mean?*

O.H. stands for open-hearth steel production, 72 lb. indicates the weight of rail per yard, 302 is the steel company's patent number, P.S. Co. represents Pennsylvania Steel Company, which made it; 1912 is the date that section of rail was rolled and the seven 1's indicate July, the seventh month of that year.

14 *When the* 20th Century Limited *was steam-powered, how much coal did it burn on an average run from New York City to Chicago?*

Electric locomotives pulled it out of Grand Central Terminal and as far as Harmon, where steam took over. Total coal consumption on an average run was 48 or 50 tons.

15 *In railroad lingo, what does the word* decorate *mean?*

It means, "Get out on top of freight cars to set hand brakes or to receive or transmit signals." When air brakes came into general use, brakemen objected to riding the tops, saying there was no need for them to be up there. "We're just decorations," they said.

16 *A brief history, please, of the Yakutat & Southern Railroad.*

Located in southeastern Alaska amid superb mountain scenery, this 11-mile line runs between the salmon cannery wharf at Yakatut, a fishing village, and a desolate spot on the Situk River. It is perhaps the only railroad on earth that was built solely for the purpose of hauling raw fish. For the past 60 years fish has been virtually its only pay load.

The Y&S operates only during the summer fishing season. Train schedules are geared to the moon, which means the tide on the river. The fish cargo cannot be unloaded except at high tide. In addition to the railroad and cannery, the region boasts a sawmill, a general store, and a total population of about 230, mostly Tlingit Indians, who ride free.

17 *Where do you get all the facts that your department prints every month?*

You might as well ask, how long is a piece of string? I get information for this department from many different sources such as railroad employes, company officials, railfans, books, magazines, the Association of American Railroads, experts in various phases of railroad operation, and so on. I have access to a railroad library; I make phone calls; I write letters. It all comes under the head of research. Three of my best sources of information are Walter A. Lucas, railroad historian and former managing editor of *Locomotive Cyclopedia;* Bill Knapke, retired SP conductor, ex-boomer, and writer; and Elliott Kahn, who compiled *Railroad Magazine's* long serialized list of railroads not listed in *The Official Guide.*

Running Extra

"Freedom Train's diesel loco, No. 292 (see Jan. dept., item 6), was delivered by Gulf, Mobile & Ohio to GM-EMD as trade-in on new power in Oct. '62 and scrapped shortly afterward," writes Lawrence D. Jones, Jr., Capt. USAF, 703 Arbor Drive, Vandenberg AFB, Calif. 93437. "The only items salvaged from her that I know of are two plaques proclaiming that she pulled the *Freedom Train.* These have been given to Casey Jones Museum at Jackson, Tenn."

Wanted by Roy F. Stock, assistant roundhouse foreman on the Santa Fe, 633 W. 2nd St., Winslow, Ariz.: the words of a poem entitled "Those Needles Engineers" that *The Santa Fe Magazine* printed years ago. (Needles is an Arizona town on the ATSF.)

(Continued on page 50)

REAL STEAM CALLIOPE RECORDINGS

DECCA No. 9-38231 (45 RPM) recorded aboard Sternwheel Steamer DELTA QUEEN by Professor E. Jay Quinby and Billy Menke. Traditional Steamboat Tunes and the big Steamboat Whistle. $1.00 Postpaid. Write
GREENE LINE STEAMERS, INC. 327 Public Landing • Cincinnati 2, Ohio

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50 to 54	2.50	7.25	14.25	27.40
55 to 59	3.00	8.70	17.10	32.85
60 to 64	3.50	10.15	19.95	38.35
65 to 69	4.00	11.60	22.80	43.80
70 to 75	7.10	20.60	40.45	77.50
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Your basic policy pays for hospital room, board and general care for covered sickness or accident. At small extra cost, you can add surgical or medical benefits, or maternity benefits to cover pregnancy or its complications, at home, in the doctor's office or in the hospital. Loss of Wages Benefits up to $300 per month are also available at low cost. For information on each, check application blank below when sending your $1.00 for our Special Offer.

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Since 1923, policyholders and beneficiaries have benefited from Service Life Insurance Company. Domiciled in Nebraska as a legal reserve company, more than $18,500,000 on all forms of coverages in all states have been paid.

FILL IN AND MAIL TODAY! *Takes only a minute to complete for family protection! Do it now!*

THE SERVICE LIFE INSURANCE COMPANY OF OMAHA · Dept. B78 1904 Farnam St., Omaha 2, Nebraska

Gentlemen — I am enclosing $1.00 in payment for two (2) months' insurance and I hereby apply to The Service Life Insurance Company of Omaha, for a Family Hospitalization policy for myself and for my dependents, if any, whose names appear below:

Full Name of Applicant _____ Sex ____

Address _____ Date of Birth _____

City _____ Zone _____ State _____

Occupation _____ Height _____ Weight _____

ONE POLICY MAY INCLUDE AS MANY AS ARE IN THE FAMILY (Applications for 1 person may be issued to adults only). (Please print full names of members whom you wish included in this policy)

FIRST NAME • MIDDLE NAME • LAST NAME	DATE OF BIRTH MO. DAY YR.	HEIGHT	WEIGHT	SEX
1.				
2.				
3.				
4.				
5.				

1. Are you and all persons named herein now in good health and free from any physical defects or deformities to the best of your knowledge? _____
2. Have you or any other person named herein during the last five years had any medical or surgical advice or treatment or any other departure from good health? Yes _____ No _____ If the answer is yes, please give details

_____

I have read the foregoing questions and I represent and affirm each answer to be true. I agree to accept the policy that may be issued upon this application. I also agree that the company shall not be liable for payment of any benefits upon sickness, disease, or injury, arising prior to the date of acceptance of this application. **I reserve the right to return the policy within 10 days and receive my money back if I should decide not to continue it.** Dated this _____ Day of _____ 19____

SIGNATURE _____
(Applicant) Head of the Family or Individual Applying Be Sure to Sign
WRITE—DO NOT PRINT

Please send information about your— Maternity Benefit Rider [ ]
Surgical/Medical Expense Rider ☐ Loss of Wages Rider [ ]

Someone asked (in Dec. issue) for info on diesel-electric loco No. 1900, built by Ingalls Shipbuilding Corp. at Pascagoula, Miss. "According to the builder's plate," writes Thomas Lawson, Jr., Stadium Halls, Box 4271, Knoxville, Tenn. 37915, "it was built in March, 1945, and carries the serial number 1501. It was supposed to be the first of a line of 1500-hp road switchers that Ingalls would build, but the plans didn't 'jell' and it was the only unit actually completed. GM&O bought it in about 1948."

An answer to the question "When were external live-steam pipes first used with locomotive cylinders?" comes from Edward H. Livesay, 1596 Midgard Ave., Victoria, B.C., Canada, as follows:

"The earliest locomotives had them: Trevithick's of 1804, Stephenson's *Rocket* of 1829, all Hackworth's engines on the Stockton & Darlington Railway in 1825, and lots of others. As for later dates, all the French 4-cylinder compounds with high-pressure cylinders back of the smokebox had them, and still do. The pipes come either straight from the dome down the boiler side or from the superheater in the smokebox, also outside back to the cylinders. All the modern Chapelon 4-cylinder compounds, several hundred of which are still running, also have them. I have ridden these machines thousands of miles during the last decade.

"In England, all the 4-cylinder simples on the old Great Western and old LMS have these outside pipes to the outside pair of cylinders. Some of these engines came to the United States in 1928 and 1939, to Baltimore and New York, and did some running in America. The *Royal Scot* that toured the States in 1933 had them. Literally tens of thousands of European locomotives had them during the past 125 years. It was the commonest arrangement possible with outside cylinders."

I am happy to learn from Earl F. Kennamer, RFD 2, Box 384, Auburn, Ala. 36830, that two short items of his which we used in *Railroad Magazine* in Sept. and Dec. 1936 were instrumental in starting him on a successful career as a free-lance writer and editor.

Sept. 1960: NdeM Northern type No. 3051 takes sand at Valle de Mexico yard.
Victor Hand, 1620 Ditmas Ave., Brooklyn 26, N.Y.

Michael A. Eagleson (agent-opr., E-L), 286 Washington St., Glen Ridge, N.J.

National Railways of Mexico: Extra 3035 South passes Extra 3031 North, which is "in the hole" at Hercules, north of Mexico City. Engines are Class QR-1. An unusual feature was the passing of two 4-8-4's, each with a freight train.

Item 6 in January department caught the eye of a Southern Pacific engineer, R. Hervey Angier, 143 Roselawn Place, Los Angeles, Calif. 90042, who offers definitions:

Interlocking: An arrangement of signal appliances so interconnected that their movements must succeed each other in a predetermined order. It may be operated manually or automatically.

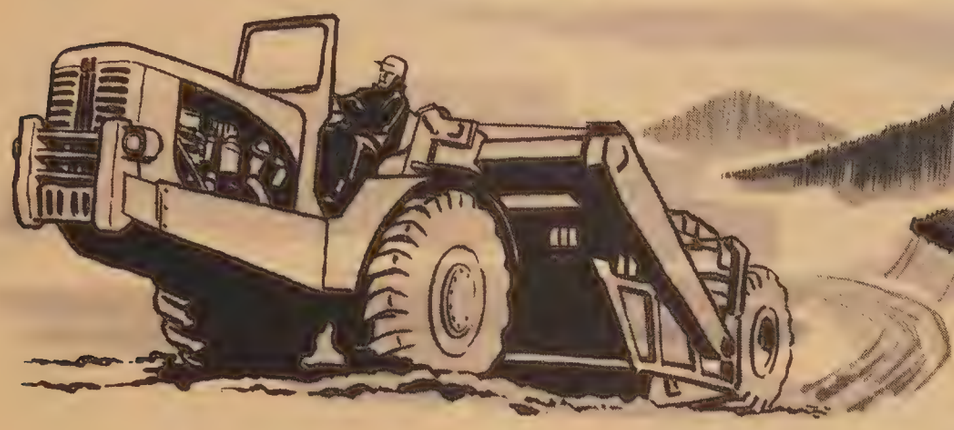
Interlocking Limits: The tracks between the opposing home signal of an interlocking.

Interlocking Signal: A home signal of an interlocking.

"Bert Pennypacker's well-researched article (Dec. '64 *Railroad*) can hardly be charged with a serious omission because he didn't record that several of the Bessemer & Lake Erie 2-10-4's spoken of saw service on the Erie during the era of World War II," writes William H. Gibbons, 13400 Clifton Blvd., Lakewood, Ohio 44107.

"This road used Texas types along with their own USRA 2-10-2 types in handling ore and drag movements through Youngstown, Ohio. Whether or not these engines worked on the Erie after the war I do not know. They seem to have been well regarded by the Erie men who ran them. Can anyone tell which engines were assigned to the Erie and how long they worked on that road?"

"I doubled my pay in 10 months with this big baby and Northwest's Heavy Equipment Training"



*"I was earning $1.75 an hour in a pottery plant when I started training for Heavy Equipment Operation. Ten months later, after completing the course, I started working as a scraper operator at $3.65 an hour. Thanks to Northwest, I have the background for the kind of work that pays good money."**

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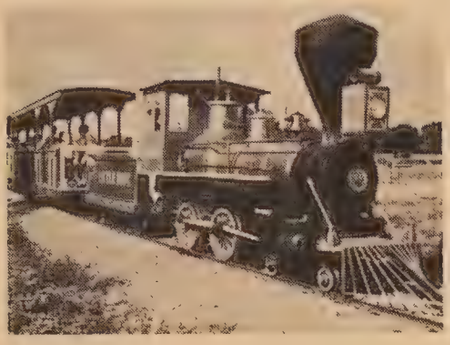

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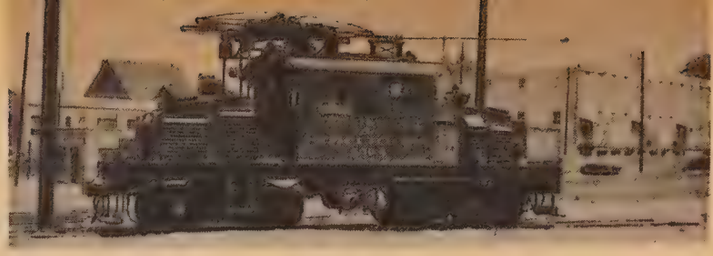

Piedmont & Northern electric locomotive No. 5004

Railfan Exchange
Box 144, Lemoyne, Pa.

PIEDMONT & NORTHERN

Rosters compiled by Pete Swanson

Roster of Passenger Equipment

Road Nos.	Builder	Date	Description	Seats	Notes
350	ACF	1913	RR-roof steel combine	26	A
351	Green.	1942	Arch-roof steel express car		B
400-403	ACF	1913	RR-roof steel trailer coaches	72	C
404	Jewett	1911	RR-roof wooden trailer coach	66	D
2000-2022	Jewett	1911-1912	RR-roof wooden interurban combines	60	
2050-2051	Jewett	1911	RR-roof wooden interurban combines	36	D
2060	Jewett	1911	RR-roof wooden express car		D
2100-2101	Southern Car	1914	RR-roof steel combines	54	EF
2102	Southern Car	1914	RR-roof steel combines	68	EG
2103-2108	Southern Car	1914	RR-roof steel coches	68	EH
2200-2201	Southern Car	1914	RR-roof steel obs.-parlor trailers		I
4000-4007	Southern Car	1911	RR-roof wooden express motors		J

Roster of Diesel-Electric Locomotives

Road Nos.	Builder	Date	Wheel Arngt.	Weight	Tractive Effort	HP	Notes
1600-1609	Alco	1950	B-B	255,000	46,000	1600	G
1000-1005	Alco	1954	B-B	230,000	?	1000	

Roster of Electric Locomotives

Road Nos.	Builder	Date	Wheel Arngt.	Weight	Tractive Effort	Length	HP	Notes
5000-5005	B-W	1911-1912	B-B	104,150	13,700	35-2	600	
5006	B-W	?	B-B	100,000				A
5100-5105	GE	1912-1913	B-B	133,800	15,500	37-3	800	B
5106	GE-Alco	?	B-B					C
5500-5502	Char.	1917	B-B+B-B		14,800	63-2	700	D
5600	Char.	1918	B-B+B-B	186,000	27,072	63-6	800	D E
5601	Green.	1924	B-B+B-B	188,900	22,400	64-0	800	
5602	Green.	1929	B-B+B-B	200,000	25,600	64-10	795	
5610	Green.	1938	B-B+B-B	230,000	69,000	64-10	1600	
5611	GE (Erie)	1941	B-B+B-B			63-4	1600	
5612	Green.	1949	B-B+B-B	252,850		63-6	1600	F

Locomotive Notes

(A) Originally Salt Lake & Utah 102, bought by P&N in 1947.
(B) 5103 has been restored and is on display in Atlanta NRHS collection.
(C) Bought from CRANDIC in 1947; original owner unknown; headlight shows number 25.
(D) Wooden cabs were originally on class 4000 express motors.
(E) Rebuilt in 1937 with steel cab.
(F) Rebuilt from No. 5600.
(G) Originally numbered 100-109.

Passenger Car Notes

(A) PRR class MPB-54 car bought in 1933, wrecked in '41.
(B) Built from wreck of 350.
(C) PRR and/or LIRR MP-54 coaches bought 1933, originally numbered 400, 325, 428, 408.
(D) Rebuilt from class 2000 wooden coach.
(E) All 2100's built as trailers and powered in 1919. (F) 2101 was rebuilt with arch roof after wreck in World War II.
(G) Rebuilt from coach by adding 10-foot express compartment. Last passenger car to run on P&N. Still used as rider and classroom car.
(H) 2107 rebuilt with arch roof and streamlined nose after wreck, renumbered 2108.
(I) 2200 "Catawba" rebuilt in 1935 with glassed-in platform; 2201 "Saluda" rebuilt as business car "Carolina" and still in use.
(J) Wooden cabs of these cars were used to build 5500 and 5600 class engines.

Miscellaneous Notes

These rosters are presumed to be correct as of Jan. 1, 1965. "Green." means P&N shops at Greenville, S.C. "Char." means P&N shops at Charlotte, N.C. "B-W" means Baldwin-Westinghouse. "GE" means General Electric. "ACF," American Car & Foundry.

Readers who can supply additional P&N info. or pix are asked to contact Peter W. Swanson, Jr., 276 Joseph Drive, Tonawanda, N.Y. 14150. He particularly wants to know about the disposition of P&N's large engines. Most of the small ones were scrapped in 1952-'3. ●

Photo by B.F. Roberts from Pete Swanson collection

Smart-looking after being restored in yards at River Jct. Shops, Greenville.

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ADDRESS _____

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Running on the 3-foot-gage track of the Colorado Railroad Museum (P.O. Box 641, Golden, Colo.) between No Agua and Delay Jct. are ex-Denver & Rio Grande Western engine 346 (Baldwin, 1881) and caboose 0404 from Rio Grande Southern.
Cornelius W. Hauck, 8400 Summerhouse Rd., Cincinnati 43, Ohio

HOBBY CLUB

Conducted by Sy Reich

SOMEONE remarked that if a man (or woman) has one strong hobby, he (or she) probably has another one also, according to Bill Kessel, 99 Center St., Hamburg, N.Y., who contributes more than a little to *Railroad Magazine's* success in the form of volunteer proofreading and unusual rail-news clippings.

Sy Reich

"For example," he adds, "E. Lewis Pardee, national president of NRHS, is also an ardent steamship buff. How many other railfans are also steamship buffs? Your editor, Freeman Hubbard, is a circus historian with a yen for elephants. His assistant, Art Knowles, is interested in his family's genealogy. Jack Pontin and E. Jay Quinby, two of the characters in *Railroad's* series of *Interesting Railfans,* are adept at the pipe organ. Ira Swett, author of many juicefan booklets, was a theater organist."

Bill Kessel himself, a railfan from way back, has fed a few manuscripts on theater organs to various periodicals. "Shortly after they were published," he coments, "the magazines folded up."

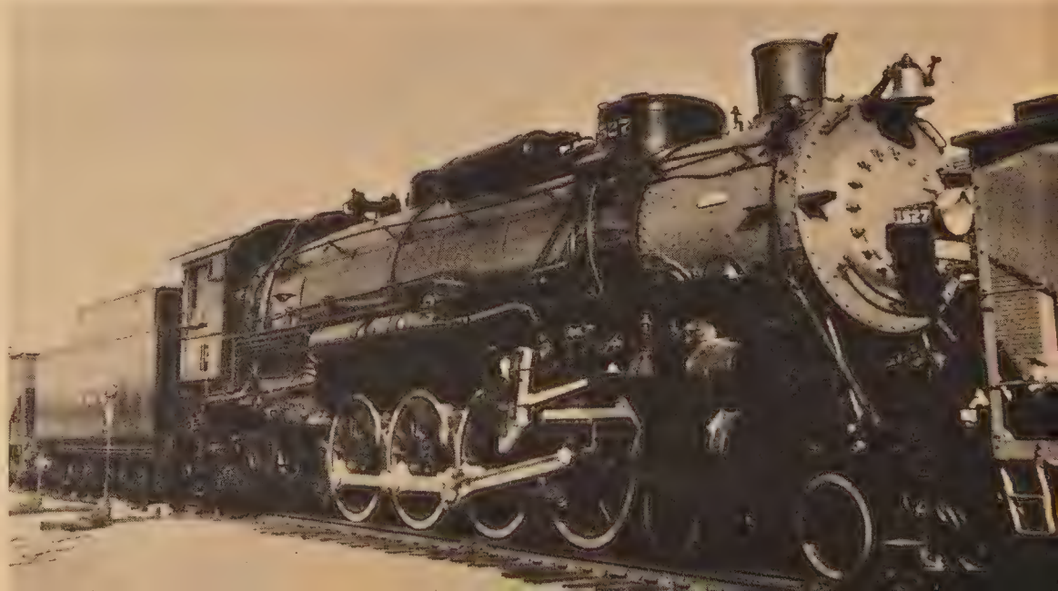
It might be interesting to learn—very briefly—what other *Railroad* readers do when they're not railfanning. (We say "very briefly" because we mean it.)

The Steam Parade

The 2-6-4 steamer pictured in our Oct. '64 issue was built by Budapest Locomotive Works (Florisdorf), says

Photo by Leo L. Schide, courtesy of W. L. George

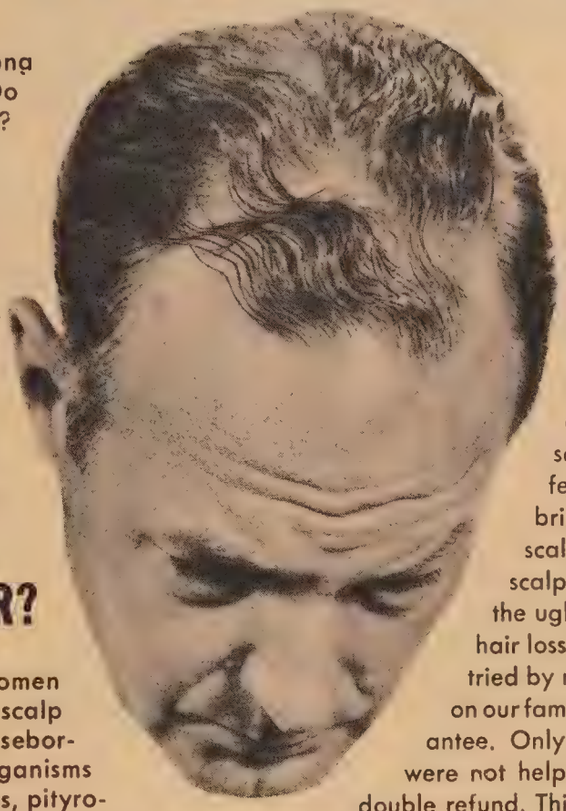
Last steamer which the Frisco had on its roster: 4-8-2 No. 1527 (Baldwin, 1926), enroute from St. Louis to Mobile, Ala., to be placed on permanent display.



IS YOUR HAIR GROWING OR GOING?

Stand in front of a mirror. Take a long hard look at the top of your head. Do you have as much hair as one year ago? Do you see any new hair growth?

If your answer is no, it is important that you take steps today to save the hair you now have. If you act now, you may be able to reverse the trend on your head. You may be able to grow new hair faster than it is falling out. Doesn't that make sense to you? Wouldn't you like to look in the mirror a year from now and see more hair on your head than you see now? Why lose your hair if you don't have to?



CAN YOU SAVE YOUR HAIR?

Every year thousands of men and women go bald — needlessly — because of a scalp infection. This scalp infection is called seborrhea. Doctors say that three germ organisms cause seborrhea: staphyloccocus albus, pityrosporum ovale, and microbacillus. These germs attack the sebacious glands and the hair follicles themselves. If not checked, permament damage is done. The hair follicles atrophy, lose their ability to produce new hairs. The result: premature baldness.

You can easily tell if you are a victim of seborrhea. If you have itchy scalp, dandruff, hair loss, very dry or oily scalp, the chances are that you have seborrhea. Neglect these symptoms and you invite baldness.

Treat your scalp to Ward's Formula. This amazing scalp medicine quickly controls seborrhea and stops the hair loss it causes.

Here's the Proof!

I must admit I didn't have much faith in it, but I hadn't been using Ward's one week before I could see it was helping me. I could feel my hair getting thicker.
E. K., Cleveland, Ohio

Out of all the Hair Experts I went to, I've gotten the *most* help from one bottle of Ward's Formula.
C. La M., Philadelphia, Pa.

After using Ward's for only 12 days, my hair has stopped falling out.
R. W. C., Cicero, Ill.

I am tickled to death with the results. In just two weeks' time—*no dandruff!* *W. T. W., Portola, Cal.*

I feel encouraged to say that the infuriating scalp itch which has bothered me for 5 years is now gone.
J. M. K., Columbus, Ohio

Male pattern baldness is the cause of the great majority of cases of baldness and excessive hair loss, for which neither the Ward treatment nor any other treatment is effective.

DOUBLE MONEY BACK GUARANTEE

In seconds, Ward's Formula kills the three parasitic germ organisms retarding normal hair growth. This swift germicidal action has been proven in scientific tests by a world-famous testing laboratory (copy of laboratory report sent on request). Ward's removes infectious dandruff, stops scalp itch, brings hair-nourishing blood to the scalp, tends to normalize very dry or oily scalp. In brief Ward's Formula corrects the ugly symptoms of seborrhea, stops the hair loss it causes. Ward's Formula has been tried by more than 550,000 men and women on our famous Double-Your-Money-Back Guarantee. Only 1.9% of these men and women were not helped by Ward's and asked for their double refund. This is truly an amazing performance.

Why not join the men and women who have successfully ended their troubles? Treat your scalp with Ward's Formula. *Try it at our risk.* In only 10 days you must see and feel the marked improvement in your scalp and hair. Your dandruff must be gone. Your scalp itch must stop. Your hair must look thicker, more attractive, and alive. Your excessive hair loss must stop. You must be completely satisfied—in only 10 days—with the improved condition of your scalp and hair, or simply return the unused portion for Double Your Money Back. So why delay? Delay may cost your hair.

H. H. Ward & Co., Inc., 19 West 44 Street, N. Y. 36, N. Y. © 1963

Doctors and hospitals can obtain professional samples of Ward's Formula on written request.

H. H. Ward & Co., Inc. Dept. 3403H
19 West 44 Street, New York 36, N. Y.

Rush Ward's Formula to me at once. I must be completely satisfied in only 10 days or you GUARANTEE refund of DOUBLE MY MONEY BACK upon return of bottle and unused portion.

Name .....

Address .....

City..... Zone..... State.....

☐ Enclosed find $2, send postpaid (check, cash, money order)
☐ Send C.O.D. I will pay postman $2 plus 76 cents in postal charges (save the 76 cents by enclosing $2)
☐ Send triple size for $5. You save $1.
Canadian, foreign, add 50 cents — No C.O.D.

DOUBLE MONEY BACK GUARANTEE

John Aardema, 223 Slater St., Paterson, N.J. 07501, contradicting a statement made by Hans Kohut of Israel.

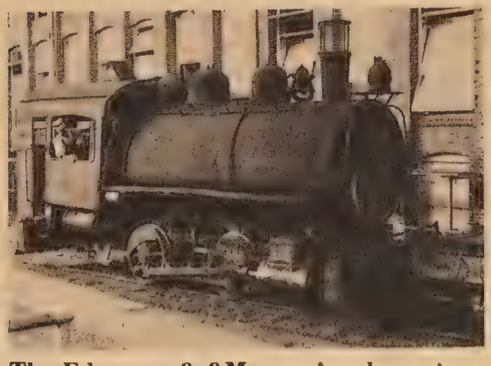
Last April a Chicago Short Line steam loco, No. 101 (Baldwin, 1944, serial No. 70175) was bought by H. Bairstow Co., contractors, 1820 Norwood St., Chicago 26, Ill., writes Adam H. Bauer of that company, and is now in service at Hammond, Ind. Also in service there (but now up for sale) is ex-TP&W 1000-hp diesel No. 320 (Lima, 1950). Both locomotives are operated under their original numbers.

An old Denver, Rio Grande & Western narrow-gage steamer, No. 168, placed on display at Colorado Springs, Colo., the road's original headquarters, will soon be transferred to nearby Antlers Park, just east of the Rio Grand depot. The move is due to the erection of a hotel-motel and an office building.

Slides of the Mt. Washington Cog Railway are available from Iron Horse Products, 600 Winter St., Waltham, Mass.: two dozen different slides of this ancient steam-powered road for $4.80, including a copy of the road's history.

In 1851, when the name Schenectady Locomotive Works was adopted, many railroads were building their own engines, in addition to which the following other locomotive builders were operating throughout the country:

Portland Locomotive Works, Portland, Maine; Amoskeag Manufacturing Co., Manchester, N.H.; Essex Company, Lawrence, Mass.; Lowell Machine Shop, Lowell, Mass.; Boston Locomotive Works, Boston, Mass.; Union Works, South Boston; Globe Works, South Boston; Taunton Locomotive Manufacturing Co., Taunton, Mass.; Mattewan Machine Works, Fishkill Landing, N.Y.; Norris Locomotive Works, Schenectady; Rogers, Ketchum & Grosvenor, Paterson, N.J.; Swinburn & Smith, Paterson; Ross Winans, Baltimore, Md.; Baldwin & Whitney, Philadelphia; Norris Brothers, Philadelphia.



The Edgmoor & &Manetta's sole engine: 0-4-0T No. 5, built by Porter, 1917.
Thomas Lawson, Jr., 1703 Melrose Place, Knoxville 16, Tenn.

"All roads lead to London." An electric train from Waterloo Station arrives at Effingham Jct. (British Railways). The lines curving at the right lead to London Bridge and Thames River.
Joseph Fox, Monomark BMEXN 3 London, W.C. 1, England

NRHS excursion Feb. 21, St. Louis to Shawneetown, Ill., lv. 8:30 a.m., Budd cars, diner, movie runs; $8.75 (kids $4.50) before Feb. 15, after which $10 and $5. Contact Ray Gehl, 6412 Prints Court, St. Louis, Mo. 63116.

Early bird Toronto trolley tour lv. Windsor, Ont., 6:30 a.m. Feb. 20, in Toronto 10:30 a.m. till 6:10 p.m.; $12, arranged by Art Weber (see page 33). Get tickets from P.O. Box 326, Royal Oak, Mich. 48068.

Coming Events

Rail tour from Pasadena to Hemet, Calif., on April 25 and May 8 for outdoor play *Ramona* sponsored by Orange Empire Trolley Museum, Box 501, Perris, Calif. 92370. Open-platform observation car on April trip. Fare $13 (kids $9), including admission to pageant and barbecue dinner afterward.

Live Steamers will converge on Los Angeles for national brotherhood meeting May 29, 30, and 31, announces Ed L. Nelson, president of the L.A. group, 2444 Via Acosta, Montebello, Calif.

Get reservations early for the circle rail tour Aug. 29 thru Sept. 11 sponsored by Iowa Chapter of National Railway Historical Society, Inc. Ride the *International Limited*, an excursion special to the big convention at Portland, Ore., and elsewhere plus a Pacific Great Eastern trip in Canada. Steam power from Chicago to St. Paul westbound, St. Louis to Chicago eastbound. Contact V. Allan Vaughn, president of Iowa Chapter, 704 E. Charles St., Oelwein, Iowa.

Brotherhood of Locomotive Engineers sponsors 42-day tour of Europe from Sept. 16 to Oct. 27 for $1,195, all expenses paid. Visit England, Holland, Belgium, Germany, Austria, Italy, Switzerland, and France. Contact M.C. Glassel, Div. 28, P.O. Box 3612, Station A, El Paso 23, Texas.

Hi-Fi Mexican Steam

Now that NdeM has dropped the fires from nearly all of its great fleet of steam locomotives and is busily scrapping them, leaving a few, however, on its narrow-gage line, numerous fans will feel like kicking themselves all over the back lot because they didn't make sound recordings of Mexican steam while there was yet time.

Fortunately, all is not lost. A folder album of hi-fi LP recordings of steam in Mexico has just been released by Mobile Fidelity Records, P.O. Box 336, Burbank, Calif. 91503. There are two double-faced 12" discs, entitled *Valle del Locomotora de Vapor* ("Valley of the Steam Locomotives").

We couldn't think of a better way to spend an hour-plus of solid enjoyment than listening to these stero/monaural platters. Included are the once-familiar sounds of Schenectady-built 4-8-4's; an ex-Florida East Coast 4-8-2, 4-8-0's, and a massive Niagara. Vicariously, we ride the cabs of steam giants through freight yards, over the countryside and a helper district and into the last big, active, steam roundhouse left in North America.

The two-pocketed album includes photos and descriptions by Ron Ziel, author of the hard-cover book, *Twilight of Steam Locomotives*. The text matter is printed in Spanish as well as English for the benefit of Mexicans. We wish it had been condensed somewhat and printed in a type face large enough for easy reading. The album, MF 14, with its two discs, sells at $6.95. Brad Miller, who supervised the recording, tells us that as long as the March issue of *Railroad Magazine* stays on the news-stands —*i.e.*, till March 10th—our readers can buy MF 14 for $6.50.

Biggest, Most Powerful

"Here is a list of some of the largest, heaviest, and most powerful American steam locomotives in each type," writes Elliott Kahn, 73-48 183 rd St., Flushing 66 N.Y.:

4-4-0: Reading class D-11s (410-419), most powerful and heaviest.
4-4-4: Baltimore & Ohio No. 1, largest and most powerful. "To my knowledge, B&O and the Philadelphia & Reading were the only American roads with 4-4-4's, but the Canadian Pacific had some which were heavier than those in U.S.")
4-4-2: Southern Pacific class A-6 (3000-3003), heaviest. No. 3002 with booster, most powerful.
4-6-0: SP class T-40 (No. 2371), built by SP in 1917, heaviest.
4-6-2: Chicago, Minneapolis, St. Paul & Omaha class E-3 (600-602), largest and heaviest; Pennsy K-5 (5698-5695), most tractive force but probably less horsepower.

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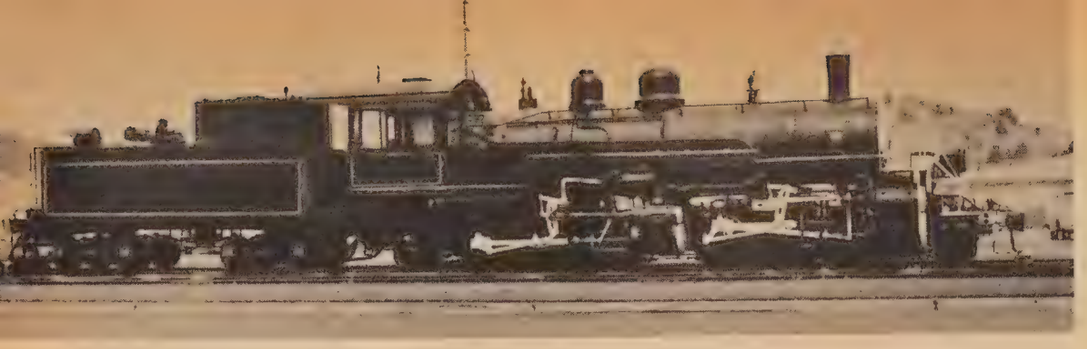

Last steamer to run on Weyerheuser Co. logging railroads over 60-year period, a Baldwin compound articulated 2-6-6-2, is now displayed at Klamath Falls, Ore.
Weyerhaeuser Company, Tacoma 1, Wash.

4-6-4: Chesapeake & Ohio 605 and 606, heaviest and most powerful.
4-8-0: Delaware & Hudson class E-7 (No. 1402), largest, heaviest, and most powerful.
4-8-2: Illinois Central 2600's, heaviest and most powerful.
4-8-4: Santa Fe 2900's, heaviest; Norfolk & Western J and J-1 (600-611), most powerful; New York Central 6000's, high horsepower but not heaviest.
4-10-0: SP "El Gobernador" (only one)
4-10-2: SP classes SP-2 and SP-3, heaviest, most powerful, and largest.
4-12-2: Union Pacific 9000's.
2-6-0: Texas & New Orleans class M-21 (520-529), biggest and most powerful.
2-6-2: ATSF 1800's, most powerful and heaviest.
2-8-0: Western Maryland classes H-9 and H-10, heaviest; D&H class E-5a (111 thru 1122), most powerful in tractive effort without booster; D&H class E-7 (1400-1402), most powerful with booster.
2-8-2: Frisco 4200's, heaviest. GN class O-8 has the most tractive effort without booster; both Duluth, Missabe & Iron Range and Elgin, Joliet & Eastern have most powerful tractive effort) 2-8-2's with booster.
2-8-4: Erie class S-4 (3385-3404), heaviest and most powerful.
2-10-0: WM class 1-2, largest, heaviest, and most powerful.
2-10-2: WM class 1-2, largest, heaviest, most powerful.
2-10-2: Reading class K-1 (3011-3020), largest heaviest, and most powerful.
2-10-4: ATSF 5000's, Pennsylvania J-1's and C&O T-1's are all about equal but Pennsy's with huge tender were largest and ATSF 5011-5020 heaviest. Pennsyl J-1's beat C&O in tractive force, and, with booster, were most powerful. Bessemer & Lake Erie Hsa had highest tractive effort without booster.
0-10-0: DM&IR class S-6 (90-93) largest, heaviest and most powerful.
0-10-2: Union RR. (later DM&IR), only ones.
0-4-0: Pennsy class A-5s, largest, heaviest, and most powerful.
0-6-0 and 0-8-0: Elliott Kahn is not sufficiently familiar with these types but would nominate 0-6-0 Jersey Central class B-7s (Schenectady 1923), with 45, 847 lbs. tractive effort and 197,000 lbs. weight, as most powerful and heaviest; and these 0-8-0's: Indiana Harbor Belt class U-4a (Alco 1927); with 74,460 lbs. tractive effort plus 12,000 booster and 294,000 lbs. engine weight, and Pennsy class C-1, with 278,000 lbs. weight, most powerful and heaviest. T&P 632 most tractive effort with booster.
0-8-2: Grand Trunk Western and IC were the only two roads to use this type, were about equal, IC having more tractive effort and GTW heavier.
Tank engines:: Boston & Albany 4-6-6T, biggest and heaviest passenger type; Grand Trunk 0-10-0T, biggest freight type.
0-6-6-0: Kansas City Southern, class G.
0-8-8-0: B&O class LL-1.
2-6-6-0: Virginian class AR (500-503), heaviest; Denver & Salt Lake 200's, most tractive effort.
2-6-6-2: B&O class KK-1 (7400), heaviest.
2-6-6-4: Norfolk & Western class A.
2-6-8-0: Great Northern class M-Z.
2-6-6-6: C&O and VGN had almost duplicate locos of this type.
2-8-8-0: KCS class G-2 (757-767), most powerful; VGN No. 610, heaviest.
2-8-8-2: Denver & Rio Grande Western class L-132, largest and heaviest; GN class R-2, most tractive effort.
2-8-8-4: Northern Pacific class Z-5 and DM&IR M-3 and M-4 had almost identical specifications but NP engines were heaviest and, with boosters, had more tractive effort.
2-8-8-8-4: VGN 700's.
2-10-10-2: VGN class AE (800-809).
2-8-8-8-2: Erie Class P-1.
4-4-4-4: (Duplex): B&O and Pennsy T-1, similar in size and power, Pennsy heaviest.
4-4-6-2 (articulated): B&O MK-1.
4-6-6-4: NP class Z-8 (5120-5149).
4-8-8-2: SP class AC-12.
4-8-8-4: Union Pacific "Big Boys" (4020-4024), heaviest.
4-6-4-4 (Duplex); Pennsy class Q-1.
4-4-6-4: Pennsy class Q-2.
6-4-4-6: Pennsy class S-1.
6-8-6: Pennsy class S-2 (turbine).

Shay: WM No. 6, largest, heaviest, and most powerful.
Heisler: Middle Fork RR. No. 7. Biggest Climax, No. 10, reportedly went to Hillcrest Lumber Co. in British Columbia, Canada. Similar-sized smaller Climaxes in U.S., all class C.
2-4-4-2: Deep River Logging Co.
0-4-4-0: Several roads, mostly industrial lines, had this type; info. unavailable on short notice. Dunkirk, Eagles Mere RR. No. 5; Baldwin geared Craft Lumber Co. No. 5 in W. Va.; Marysville & Northern RR. No. 2 in State of Washington, both same size.
Most power horsepower-wise of all American locomotives were the UP 4000's (4-8-8-4) and Pennsy's class Q-2 (4-4-6-4) with just under 8000 horsepower rating.

These comments on the foregoing list come from Bert Pennypacker, 4307 Palmetto St., Philadelphia Pa. 19124, who is writing the story of Lackawanna steam power for our magazine:

4-4-4: According to "A Century of Reading Motive Power," the Reading's class C-1a, Nos. 110-113, weighed 230,800 lbs., with 36,604 lbs. tractive effort. According to Staufer's new book, "B&O Power," the B&O's No. 1, class J-1 (Lady Baltimore), weighed 217,800 lbs. and had 28,000 lbs. tractive effort with booster. In any event, this places RDG engies on top in both weight and power categories. Canadian Pacific locos weighed more but had far less tractive effort.
4-4-2: Reading P-7sb, Nos. 350-353, were the most powerful without a booster; 32,800 lbs. t.e. Weight of SP class A-6 and Pennsy class E-6s varied but 300 lbs., but Milwaukee class A, Nos. 1-4, were heaviest, 290,000 lbs. The SP A-6 was the most powerful with booster.
4-6-0: Pennsy class G-5s, with 41,330 lbs. t.e., was the most powerful.
4-6-2: I can't locate any reference to the Omaha Road but want to check it against the weight of B&O class P-7d, 347,500 lbs. While the Pennsy class K-5 had more t.e. than the Omaha Road loco without a booster, the Omaha engine was ahead with booster; but the Pennsy K-5 definitely had a bigger boiler and more horsepower.

4-6-4: correct numbers of C&O class L-2 were 300-307. While this was the most powerful 4-6-4 with a booster, the most powerful Hudson without a booster was IC No. 1, renumbered 2499, with 58,000 lbs. t.e.
2-8-0: Reading class I-10sa, Nos. 2000-2049, weight 322,690 lbs., were the heaviest. D&H class E-7, Nos. 1400-1402, were also the heaviest, even heavier than the Reading's, but these D&H monsters were freaks, compounds, and unsuccessful. D&H No. 1402 weighed 356,000 lbs. Eliminate WM from this category and specify the RDG class I-10sa and D&H class E-6a as orthodox 2-8-0's, with the D&H E-7 being unorthodox experimentals. Of the orthodox machines RDG class I-10sa was heaviest and D&H E-5a most powerful, while D&H E-7 was the heaviest and most powerful experimentals.
4-8-0: No. 1403, named L. F. Loree, also was an unorthodox experimental, a 4-cylinder compound with triple steam expansion.
2-10-2: Should be class K-1sb as built, later changed to K-1se. A rebuilt IC 2-10-2 with a booster had higher t.e. IC 2800 series had 110,512 lbs. t.e. using booster. (RDG engines were heaviest.)
2-10-4: tenders on Pennsy, C&O, and ATSF were about equal. Pennsy tender wasn't bigger but Pennsy engines had a good edge on weight over the other two roads. B&LE classes were H-1a thru H-1g. Most powerful was T&P 632 with two boosters, 432,000 lbs. t.e.
2-10-0: Adjusted t.e. of Pennsy I-1sa, 96.000 lbs., was only 300 less than WM I-2. As built in class I-1s, the Pennsy engines had 50 percent cut-off, which gave them reduced t.e. rating of 90,000 lbs.; but in the improved I-1sa version, as rebuilt with new steam vents in cylinders, the cutoff was adjusted to better advantage.
0-8-0: Reading's class E-5a, Nos. 1494, 1496-1499, had t.e. of 77,855 lbs. without booster, while Pennsy C-1 rated 76,154 lbs. and the IHB class U-4a was 75,700 lbs. But the IHB was ahead of all in weight, 294,000 lbs., and rated the most t.e. with booster.
4-4-4-4 (Duplex): B&O and Pennsy were not similar. B&O weighed only 391,550 lbs. while Pennsy T-1 weighed 502,200 lbs. But t.e. was closer, 63,000 lbs. for B&O N-1 and 65,000 lbs. for Pennsy T-1. ●

For sale by Jas. Valesch, New Albin, Iowa: 2'-gage 8-ton 0-4-0 coalburner, can be changed to oil, price $2980.

Two Union Pacific steamers and a diesel. Photo made by H. L. Kelso at Victorville, Calif., in 1947 shows the diesel-powered *City of Los Angeles* westbound.

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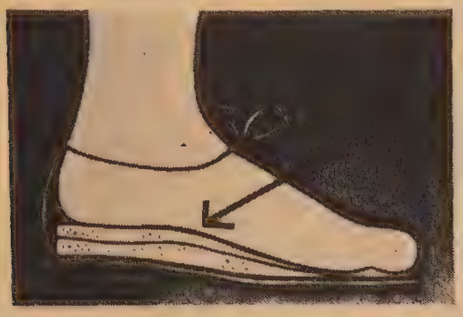

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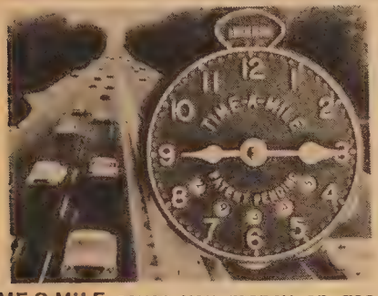

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The original of this painting by Otto Kuhler is in vivid watercolors. It shows one of the most desolate spots on the National Railways of Mexico main line, between Cd. Juarez and Chihuahua. "I often pass these graves," writes Mr. Kuhler. "Fierce sandstorms long ago blasted off the names of the *hombres* resting here. Sometimes I see new tin cans filled with wilted flowers on the graves. How well I remember an approaching storm like the one I have pictured! I call my painting 'Violent Country.' It catches the spirit of many anecdotes in the 'Trackside Graves' chapter in Freeman Hubbard's book, *Railroad Avenue*."
Otto Kuhler, KZ Ranch, Pine, Colo. 80470

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RAILROAD AVENUE: *Great Stories and Legends of American Railroading*, by Freeman Hubbard, 444 pages, 6x9", illustrated, indexed, Golden West Books, P.O. Box 91, San Marino, Calif., $5.95.

"Relatively few cities or towns," Freeman Hubbard writes, "did not have a *Railroad Avenue* or its equivalent. This street, with what it stands for, is as much a part of our civilization as Main Street or Courthouse Square."

It is a place—yes, but more than a place, he goes on. It is a way of life. It symbolizes the human side of a great industry, the men who punch tickets and handle the throttle and throw switches. *Railroad Avenue* is Casey Jones, Kate Shelley, and Kitty Sullivan. It is *The Wreck of the Old 97*. It is James J. Hill and Henry M. Flagler. It is also the gandy dancer who rests in a nameless trackside grave.

"The people of *Railroad Avenue* have their own heroes, their own legends, their own code, their own lingo," says Hubbard. "This book was written for all persons who have followed the lure of the singing rails or wanted to do so."

It is a classic book about a classic street. The author has delved into folkways, sifting fact from fancy. He presents real characters and tells how the old songs and legends originated. All the gusto and glory, the heroic, the humor and pathos which set apart railroaders of yesteryear surge through these pages. There is much to relate, and Hubbard does it well and in proper perspective.

Among the many subjects he covers are the great Hinckley fire in the big woods, wanderlust, Johnstown flood, the Andrews raid of 1862, trackside graves, rail lingo, births on trains, John Henry, Kate Shelley, and the Woodstock's last run. Also the grisly TP&W pile-up at Chatsworth, which nearly set an all-time death record but was better memorialized by a ballad than by newspaper reporting. And Jesse James, whose deeds likewise are kept green by a ballad long after Western-style train stickups have vanished.

Especially interesting are the stories

behind the various railroad emblems and how they evolved. How did the Great Northern get its goat, the Illinois Central its diamond, and the Pennsy its keystone? Hubbard has the answers.

Apart from specific stories and anecdotes, of which there are legion, a thread of warm association with railfaring men and women as well as railroad writers permeates this book. Born into a Pennsy family—on *Railroad Avenue,* you might say—Hubbard has been specializing in rail lore since early youth. As editor of *Railroad Magazine* he enjoyed the friendship of Mrs. Casey Jones and Casey's last Fireman, Sim Webb; John Shelley, brother of the immortal Kate; Lucius Beebe, Bill Knapke, Isaac B. Tigrett, and "Haywire Mac" McClintock, author of *Big Rock Candy Mountains,* and a long list of others, who are written about in *Railroad Avenue.*

Published originally in 1945, the book received nearly 200 newspaper and magazine reviews, all of them favorable, and quickly became a best-seller, but has long since been out of print. The new enlarged edition, just issued, has 70 more pages, much additional text matter, and three times as many illustrations. It is a book of fine quality.

As time goes on, numerous other books will be written about the colorful days of steam and Morse. No doubt some of them will be accurate in the way that archeologists are accurate but, like men who dig second-hand into the past, will be warmed-over history, lacking in savor. As boomers disappear into the sunset, their way of life will have to be re-created—from *Railroad Avenue* and other source material.

Freeman Hubbard got much of the stuff for *his* book *first*-hand. To have known veterans of the "Old Guard" personally is a mark of distinction; to be able to portray them in the fullness of life is a rare gift. These gifts have been vouchafted to Hubbard, and that is why *Railroad Avenue* is considerably more than a mere illustrated recital of tales and ballads.—*Frank P. Donovan*

STEAM LOCOMOTIVES OF THE BURLINGTON ROUTE, by Bernard G. Corbin of Red Oak, Iowa, and William F. Kerka of Parma, Ohio, 320 pages, thick coated paper, 8½x11″, copiously illustrated, frontispiece in color painted by Alvin F. Staufer, and including text matter, locomotive plans, specifications, assignments, rosters, $15.

For steam enthusiasts and especially Burlington fans, this massive volume, weighing over 3½ pounds, has an undeniable appeal. It belongs in railroad libraries beside another recent CB&Q volume, David P. Morgan's more professionally-written *Diesels West,* and it tells the reader what he'd like to know about Burlington steam power as well as a history of the system, with a photographic picture gallery that could be studied for hours.

We learn, for instance, that the first iron horse to burnish the lightweight iron rails of the CB&Q's Aurora branch was the little 4-2-0 *Pioneer*, Baldwin's 37th, better known as the No. 1 engine of the Chicago & North Western, or rather the first one on a predecessor line.

The 67 pages devoted to detailed plans and specifications will be pounced upon eagerly by model-builders, a category which includes both Bernie Corbin and Bill Kerka. Even more of the giant-size pages present rosters and assignment sheets with permanent reference value. The last section in this book, titled "Miscellaneous Photographs," was culled from various sources but mostly from the nearly 1400 negatives and 3000 prints in Corbin's own collection.

RAILROADS AND AMERICAN ECONOMIC GROWTH: *Essays in Econometric History*, by Robert W. Fogel, 296 pages, 6-9″, illustrated with graphs and maps, including a 13x8″ folded map of internal navigation in 1890, plus appendices, bibliography, and index,

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Harry K. McClintock (Haywire Mac), boomer switchman, author of the song *Big Rock Candy Mountains:* one of the characters in *Railroad Avenue.*

The Johns Hopkins Press, Baltimore, Md. 21218, $6.95.

The author, a college professor, minimizes the railroads' role in developing our country economically during the 19th century. His essays contend that the United States could have achieved nearly as much prosperity without the railroads as it did with them. Apparently Professor Fogel is more familiar with graphs and algebraic formulae than he is with history. Those who profit from transportation by inland waterways may take his book seriously. We don't.

WILLIAM STANIER: *an Engineering Biography*, by O. S. Nock, 190 pages, 6x9", illustrated with photos and line drawings appendices, index, published by Ian Allan; distributed by Leisure Time Books, P.O. Box 634, New Rochelle, N.Y., $9.25.

O. S. Nock, the world's most prolific writer of railroad books, all from the British viewpoint, tells the story of a great chief mechanical engineer of the London, Midland & Scottish Railway and the magnificent steam locomotives he built. It's a fascinating story for those of us who like steam power.

INSIDE A DIESEL LOCOMOTIVE, by Basin K. Cooper, 62 pages, 5½x8½", illustrated with drawings by John W. Wood, published by Ian Allan; distributed by Leisure Time Books, $2.

This book tells in plain language and with excellent diagrams how the diesel locomotive works.

RAILWAY CARRIAGES: 1839-1939, by G. M. Kitchenside, 64 pages, 5½x8½", illustrated with photos, published by Ian Allan; distributed by Leisure Time Books, P.O. Box 634, New Rochelle, N.Y., $2.

History of British passenger cars plus list of 45 that are preserved.

STEAM LOCOMOTIVES, by Alan Williams and David Percival, 64 pages, 5½x8½", illustrated with photos, published by Ian Allan; distributed by Leisure Time Books, $2.

Some outstanding British types described and pictured.

THE WABASH IN IOWA, by Frank P. Donovan, 32 pages, 5½x8", illustrated, *The Palimpsest*, State Historical Society of Iowa, 35 cents.

Another in Donovan's popular series of various railroads serving Iowa. It includes a reprint of an old favorite song, *The Wabash Cannonball,* as follows:

From the waves of the Atlantic to the wild Pacific shore,
From the coast of California to icebound Labrador
There's a train of doozy layout that's well-known to us all;
It's the 'boes' accommodation called the *Wabash Cannonball.*

Great cities of importance we reach upon our way,
Chicago and St. Louis, Rock Island, so they say,
Then Springfield and Decatur, Peoria above all,
We reach them by no other route but the *Wabash Cannonball.*

Now listen to her rumble, now listen to her roar
As she echoes down the valley and tears along the shore;
Now hear the engine's whistle and her mighty hoboes' call
As we ride the rods and brakebeams on the *Wabash Cannonball.*

THE BALDWIN LOCOMOTIVE WORKS: *Record No. 78: Locomotives for Industrial and Contractors' Service,* 32 pages, illustrated with photos and line drawings, published originally in 1914, reprinted by Harry P. Albrecht, 40 Wilton Ave., Clifton Heights, Pa., $2.

Builder's photos and specifications.

HO SCALE PLANS: 8 booklets, each about 7 pages, 8½x11", paperbound, illustrated with line drawings, Ontario Society of HO Model Engineers, Toronto, Ont., Canada (no street address given), $1 per copy, $8 for all.

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These books are available only by mail. Money order or check may be sent to *Railroad Magazine Book Service* (not book publisher), 205 E. 42nd ST., New York, N.Y. For example:

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EARLY RAILWAYS, by J. B. Snell	$ 4.95	($ 4.70)
TRAINS ANNUAL	$ 3.75	($ 3.50)
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THE TRAIN THAT NEVER CAME BACK (true railroad stories for 8-12 age) by Freeman Hubbard	$ 2.50	($ 2.25)
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STEAM LOCOMOTIVES & HISTORY: GEORGIA RR. AND WEST POINT ROUTE, by Prince	$ 9.50	($ 9.00)

Setouts and Pickups

"I was surprised to read in *Railroad Magazine* that the Southern Pacific was asking for a 30 percent increase in commuter fares, when so many other roads are cutting fares to attract more passengers," writes H. Kohut, P.O. Box 1004, Givatayim, Israel. "Will someone please explain the SP situation to me?"

Best-selling title listed by *Railroad Magazine* Book Service is Jim Shaughnessy's *The Rutland Road,* a Howell-North book reviewed in our Dec. '64 issue. It weighs about 3½ pounds and boasts 468 illustrations.

According to latest reports, Rogers E. M. Whitaker, one of the men in our series of *Interesting Railfans,* has traveled a total of 1,744,000 miles by rail in North and South America and Europe —the alltime record for non-railroaders. Rogers just loves to ride trains, "no matter where they are going."

Pix and information are wanted by John P. Killoran, Watoga State Park, Huntersville, W. Va. "This state's Department of Natural Resources," he writes, "has assigned to me the task of compiling a book about the Cass Scenic Railroad, its history, anecdotes, and photos. I want to hear from anyone who has visited Cass and collected railroadiana from the tourist shortline and/or any of its predecessor operational companies: W. Va. Pulp & Paper Co., Mower Lumber Co., and others. All photos we use will be credited to the contributors. Anyone who helps us will get a free copy of the book."

Mr. Killoran assisted one of our authors, Bill Warden, with material on the Cass Scenic for use in a feature article to appear in our May issue.

Cloth patches of railroad emblems—just the thing to wear on fantrips—are gaining in popularity. An illustrated catalog of available patches, listing 175 roads, may be had for 15¢ from M. B. Austin, P.O. Box 904, San Mateo, Calif.

Railroad map showing single and multiple tracks of all U.S. common-carrier rail lines—4 sheets assembled to form one map 84x88", series 8204—entire map available for 60¢ from U.S. Army Map Service, Corps of Engineers, 6500 Brooks Lane, Washington, D.C.

Another good, clear-cut map, in two colors, 17x22", shows the class of passenger service offered by railroads in North America. It differentiates between lines with first-class service, coach only, mixed train, and service other than daily, all information as of Jan. '64. This map is included as an insert in *Railfans Directory 1964,* $3, or may be obtained separately at $1 each from the publisher, Vane A. Jones, 2525 E. 35th St., Indianapolis 18, Ind.

"While traveling over the Norfolk & Western's Abingdon branch not long ago," writes L. B. Dutton, General Superintendent, Mechanical and Operating Department, High Point, Thomasville & Denton RR., Box 671, High Point, N.C., "I saw an old wooden water tower, previously used for steam locomotives, at West Jefferson, N.C. My own road still has a 50,000-gallon steel tank at High Rock, N.C., at our junction with the Winston-Salem Southbound Railway.

"Another interesting item picked up on my N&W trip was the method of anchoring the wooden trestles to keep them from washing or floating away during high water. Many of them were anchored by steel cables from the bridge to the opposite stone-cliff side and the latter ends were secured with large bolts in drilled holes." ●

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Next time you watch TV show *Petticoat Junction*, think of this 3-mile, 3-foot-gage pike at Long Beach Resort in Florida. The engine, a Porter 2-6-0 coalburner, hauls tourists over the line. Her plates are gone; her history is unknown. Hogger is E. L. James, retired from the old Live Oak, Perry & Gulf, but the photographer forgot to tell us the fireman's name.
Wilbur T. Golson, 9124 San Lo Drive, Baton Rouge 15, La.

The Switch List

THESE items are published free and in good faith, without guarantee. Keep within 28 words, including your name and address. Use abbrevation such as *tts.* (timetables); *emp. tts.* (employees timetables), and *SSE* (send 5¢ stamped envelope for list or details).

Write each item plainly or pen-print or typewrite it on a postcard or separate sheet of paper—not buried in a letter about other matters. If you want pen pals, state your special interests so that they will know what to write about. Too many readers forget to do this.

A tight printing schedule compels us to close the *Switch List* long before publication date. As this magazine hits the newsstands our April department is already closed. Entries for our May issue (out approximately April 10th) should reach us by January 15th. Address Sy Reich, *Railroad Magazine*, 205 East 42nd Street, New York, N.Y.

Miss WANDA ADAMS (age 16), 1050 Catholic Church Rd., Rte. 2, Leslie, Mich., wants pen pals.

C.T. ANDREWS, 4231 S.W. 38th St., West Hollywood, Fla. 33023, sells and trades 4x5 and p.c. size pix LV, RDG, L&NE, CNJ, DL&W, D&H, Pa shortlines. (SSE).

HARRY BENNETT, Jr., 1804 N. Mount St., Baltimore, Md. 21217, wants pix GM&O Ingalls diesel 1900, P&BR gondolas, NYNH&H's ex-VGN locos.

ROGER BOISVERT, 2231 2nd Ave., Trois Rivieres, Que., Canada, wants pix, any size, CN 1298, 1302, 1304, 1305, 8433, 8434,8436, 8440; also CP 2632, 2639, 2656, SL-5, SL-6, 6962, 6963, 6966.

H. J. BROOKS, 171 Keewatin Ave., Toronto 12, Ont., Canada wants info. and pix Toronto & York Radial Ry. carbarns, stations, substations, bridges, etc.

O.W. BROOKS, Box 187, Emporium, Pa, 15834, will trade 85 issues of Railroad Magazine '46-'63 and 6/55 issue of Official Guide for good camera.

COMADE BUDHOO (boy, age 16), 25 Charles Pl., New Amsterdam, Berbice, British Guiana, South America, wants pen pals.

LEO CALOIA, 907 Adelante Ave., Los Angeles, Calif., trades LAMTA 35mm slides, negs. for NOPS, SLPS, EPCL, etc., trolleys.

J.W. CLEMENT, 203 N. Elm, Rome, Ga., sells old issues of Railroad (SSE).

T. COTT, Carrick, Otranto Pl., Dunleary, Ireland, wants Baldwin "Records of Recent Construction." Sells U.S. railbooks, etc.

P.D. CUSTER, Jr., 730 Charlevoix Ave., Petoskey, Mich., will buy dupl. color slides SSW cab unit in orig. gray and yellow colors.

HOWELL DAY, 300 Vail Ave., Dunellen, N.J. 08812, wants pix, plans, info. on inspection locos of the LV and Pa. & NY Canal & Ry.

OWEN DAVIES, 1214 N. LaSalle St., Chicago, buys and sells much railroadiana, esp. old rr. books; list 10¢.

H.L. DeHOFF, 1130 N. Meridian St., Portland, Ind., will buy "History of Grand Rapids & Indiana RR." 2 vols, by J.W. Edgerton. (Ed. note: Contact Owen Davies or Grahame Hardy. Both specialize in sale of old rr. books.)

Mrs. HELEN DeMARC, Box 2188, Globe, Ariz., seeks husband, Bert, now 81, reportedly gone to Mexico, and his brother, Roy, who was photographer in Toronto, Canada.

RAY DESCHENES, 903 Mohawk Rd., E., Hamilton, Ont., Canada, sells 3½x5 to 11x14 steam pix CN, CP. List 10¢. Buys steam negs. CN, CP, TH&B.

"BUTCH EDENS (age 21), 224 W. Bernard St., West St. Paul, Minn., wants pen pals.

JAIPEROUD EDWARDS (boy, age 14), William Burgh, Corentyne, Berbice, British Guiana, South America, wants pen pals interested in swapping photos and newspapers.

Mrs. BLANCHE EWELL (age 52), 647 S. Worth St., Indianapolis, Ind., interested in pen pals.

Mrs. SUE FUNK (age 28), 1731 County Line Rd., Rte. 6, Pine Bluff, Ark., wants pen pals.

CHAS. GARDINER, 39-20 220 St., Bayside, N. Y. 11361, sells various rr. books. (SSE).

JIM GRAHAM, Box 275, Summit City, Calif., wants all issues of Railroad Man's Magazine and Railroad Magazine '06-'19 and '29-'40.

BOB GREENAWALT, 3643 N. Rosemead Blvd., Rosemead, Calif., buys stocks and bonds of defunct rrs.

GRAHAME HARDY, Box 622, Carson City, Nev., buys and sells old rr. books and wide variety of other railroadiana; list 10¢.

TOM HARPER, 6066 Reinhart St., Philadelphia, Pa. 19142, sells and trades orig. Kodachrome slides of B&O "Iron Horse Days," also PRR, RDG, B&O diesels.

LEE HASTMAN, 8822 Mason, Morton Grove, Ill., sells steam and diesel pix and diesel negs. and color slides in Chicago area.

KARL HENKELS, 1628 N. Oakley, Chicago, Ill. 60647, trades and sells orig. 35mm Kodachrome of diesels and cabooses in his area. No list, but always has at least 700 items on hand.

WM. HOFFMAN II, 326 South East Ave., Baltimore, Md. 21224, sells 5x7 steam pix B&O, WM, DM&IR, NP, etc. List 10¢.

W.H. HOWELL, Jr., 1317 McClellan Ave., Port St. Joe, Fla. 32456, wants pix FEC 4-6-2's 111, 123, 115, 150, and 155.

ANDY JACKSON, 17 Bryant Ave., Springfield, N.J. 07081, wants data and will buy pix, loco bell, etc., of old Racquette Lake RR.

C.W. JERNSTROM, 822 Pelham Drive, Fort Wayne, Ind., sells steam and interuban pix and negatives. Large collection. (SSE)

ARNOLD JOSEPH, 2512 Tratman Ave., New York, N.Y. 10461, sells old issues of Railroad Magazine, Trains, R&LHS Bulls., model mags., etc. (SSE) Buys collections of such mags., good cond.

DON KEHL, 1096 Pine St., San Francisco, Calif. 94109, buys shortline steam and elec. letterheads and tts.

GORDON KELLEY, USCGC Casco (WAUP 370), 427 Commercial St., Boston, Mass., buys, trades switch keys.

M.J. KEM, 153 Church Rd., Teddington, Middlesex, England, (signalman for British Rys.) wants to correspond with U.S. or Canadian rr. signalman.

FORREST KLASE, Moose Lake, Minn., wants pic and info. on M&STL pass. train that ran between Winthrop, Minn., and Storm Lake, Iowa.

BASIL KOOB, Box 279, Ft. Dodge, Ia. 50502, will sell Railroad Magazine '45-'63, Trains, Mdl. RRer, Photograph Annual, railroadiana, booklets, slides.

GLORIA KROIS (age not given), 501 First St., New Brighton, Mass., wants pen pals.

ALEX LADD, 120 N. Meteor, Clearwater, Fla., buys rr. bonds, stock certificates. Other collectors, please write.

FRANK LESTER, 1415 Crestwood Dr., Las Vegas, Nev., seeks pix of ATFS steam-generator units converted from tenders at Williams, Ariz.

GARY LOEFFLER, 717 Rublee St., La Crosse, Wisc. 5403, wants any size steam pix or negs. of logging rrs., also 2½x3½ diesel negs of CMSP&P.

Mrs. BARBARA LOFTUS (age (37), 445 Dudley, Dearborn Heights, Mich., wants pen pals.

BUDDY MANNING, 57 Brook Rd., Fairborn, Ohio, asks readers to send info. on Budd RDC's.

PAUL MARTIN, 14648 Prospect, Dearborn, Mich., sells Detroit area rr. map 17x22. (What price, Paul?)

ED McGRATH, Box 376, Mahanoy City, Pa. 17948, sells LV train orders from about 1910, P&R tkts. and waybills of '90's. Off. Guides '59-'61. Wants rule books, switch keys.

W. MERTENS, R.R. 2, Box 360, Coventry, Conn., will buy Golden Glow headlight and Conn. Co. style metal destination signs, for use at Ware house Point Trolley Museum.

DAN MUIR, 2212 Glenwood, Trenton, Mich. 48183, will sell Detroit & Southern brakeman and conductor's cap badges.

JOHN NELSEN, 71 Humphrey Dr., Syosset, N.Y. 11791, sells and buys D&H negs., pix, railroadiana. List 25¢.

L.W. NELSON, 8 Carrie Lane, Nanuet, N.Y. 10954, buys NJ&NY and West Shore tts., pix.

JOE NICHOLAS, 409 Nicholas Ave., Palmer, Mich. 49871, wants rr. songs, poems, jokes, anecdotes, phonograph records, books on rr. lore, etc.

WARREN NORCROSS, 5411 Whitby Ave., Philadelphia 43, Pa., will buy bldr's cast-iron or brass plates of steam, diesel, or elec. locos.

CARL ODDIE, 3428 N. Albany St., Chicago, Ill., seeks news of brother Richard, last heard from 10 yrs. ago when working on West Coast rrs.

ALAN OXLEY, 2214 Royce Ave., Kalamazoo, Mich., will sell 23 issues Midwest Rrer, Nos. 22 thru 45, all excel. cond. exc. 34. Make offer.

ANNA PRITCHARD (age 44), 3715 Warsaw Ave., Cincinnati, Ohio, interested in pen pals.

ART RICHARDS, 21 Briarfield Rd., Tyseley, Birmingham 11, England, wants North American pix, esp. Shays, C&O 2-7-6-6, 2-8-4, WM 4-6-2, 2-10-0, and early 4-4-0's.

C. W. SHAW, Box 4082, Baton Rouge, La. 70804, will sell copy of NYC calendar painting "As Limiteds Pass in Night." (For how much?)

Miss JACKIE SHELLENBERG (age 14), 83 Chicago Ave., Columbus, Ohio, desires pen pals.

PETE SMALL, 274 Chestnut Ave., Glen Riddle, Pa. 19037, has negs. about 30 yrs. old of C&LE, LVT, PRSL, Pub. Ser, P&W, etc. (SSE) (Ed. asks: Pete, why didn't you say whether you want to sell or trade those negs, or sell or trade prints made from them? How are readers supposed to guess?)

TOM SMITH, 162 Marcy St., North Babylon, N. Y., buys Virginia & Truckee pix, railroadiana, books, info.

TED SONSTENG, 10507½ Division St., Spokane, Wash., sells paperweights made of 2" lengths of old mine rail, $2 each.

D.W. TAYLOR, 114 Erdenheim Rd., Philadelphia, Pa., 19118, sells railroadiana of RDG, CNJ, PRSL; Pennsy; answers all mail. (SSE) (Ed. note: what kind of railroadiana, Ed?)

JOHN THOMPSON, 1571 Mt. Pleasant Rd., Toronto 12, Ont., Canada, buys and trades orig. 35mm Kodachrome slides steam, elec., diesel, transfers, tkts.

TED THOMPSON, 2006 Blaine St., Williamsport, Pa. 17705, sells wide variety of railroadiana. List your wants.

DICK VARTABEDIAN, 16575 Whitcomb, Detroit, Mich., buys and trades 35mm color slides diesels, esp. cab units and southern rrs.

BILL WARDEN, 1216 Shamrock Lane, Waynesboro, Va., sells 5x7 and 8x10 steam and diesel photos on approval. N&W, VBR, BC&G, B&O, PRR, many others. (SSE) (Ed note: Bill is not only a good photographer but also a Railroad Magazine author. His article on Cass Scenic RR. in W.Va will appear in our May issue.)

GLENN WIGREN, 605 Willard St., Ext., R.D. 2, Jamestown, N.Y., wants pix NYC 2-8-2, 2020 ex-MC 7920 and IC 2-8-2 1706 ex-KN 1533.

C.R. WILBURN, Rockhill Furnace, Pa., sells East Broad Top Train orders, baggage checks, tts.

ROBERT YOUNG (age not given), P.O. Box 452, 41 Yeldham Rd., Port of Spain, British West Indies, wants pen pals.

NICK YUSHKEVITCH (age 58), last heard from in Fort Worth, Tex., in 1959, contact your sister, Mrs. Stanley Jankouska, 3041 Union Ave., Steeger, Ill.

BOB ZELISKO, 8114 N. Wisner St., Niles, Ill. 60648, wants 35mm color steam slides of CB&Q, GTW, C&NW, NKP, B&O, NYC, IC, CMSP&P, and SOO all in Chicago area '54-'58.

Model Trading Post

CASE KOWAL, 6615 S. Bell Ave., Chicago, Ill, wlil sell AF O-gage frt. cars 3207, 3210.

MATT RICHTER, 124 E. Broadway, Milford, Iowa, will sell Lionel equip and layout.

LEO WITUCKI. 1034 N. Brookfield St., South Bend, Ind. 46628, will sell HO gage Maerklin layout with locos, tracks, overhead, switches, etc.

EARLE MAIER, Box 51, Oshtemo, Mich. 49077, will sell Mdl. RRer '36-'38, '41-'47, and misc. copies '34-'54, or swap for old tinplate. (SSE)

PAUL MARTIN, 14648 Prospect, Dearborn, Mich., will sell Tyco F-9 Pennsy loco, like new, $4, or trade for 15 emp. tts. (Ed. note: Do you mean emp. tts. of any roads, any date?)

AL MILLER, 3212 34th Ave. S., Minneapolis, Minn. 55406, wants AF wide-gage '28 Statesman pass. set in orange. ●

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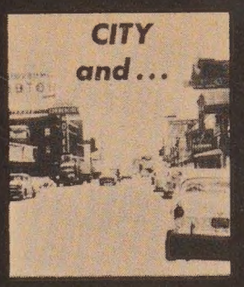

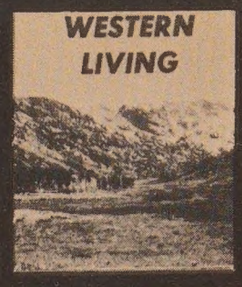

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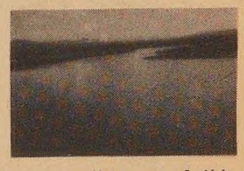
FISHING: In jewel like lakes, and mountain fed bottom streams you'll catch trophy size German Browns, Rainbow and Brook Trout .. large mouth fighting Bass. **RANCHO owners can catch their dinner within easy driving distance of the property lines.**

YOUR OWN LAKE ... You, and your invited guests will spend many happy hours boating, fishing and picnicking at nearby Lake Osino. There is no charge to Rancho owners for full rights to the use of this private multi-acre lake and park area.



PROVEN OPPORTUNITY: Yes, individuals are taking advantage of Nevada opportunity. But the country's leading corporations are also investing in their Nevada futures. Industrial giants, who erect plants where increasing land values and population demand them, are building or have secured acreage throughout Nevada.

LOW OR NON-EXISTENT TAXES: As a result of Nevada's low realistic tax structure, Profits And Wages Are Kept; not paid out to the state. NEVADA HAS NO STATE INCOME, INHERITANCE, CORPORATION OR GIFT TAX. The low real property tax is definitely limited by the state constitution. YES, NEVADA IS ONE OF OUR LAST FRONTIERS OF TAX FREEDOM!

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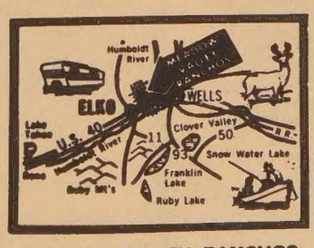

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ELKO, NEVADA

MEADOW VALLEY RANCHOS
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Yes! — Reserve acreage at MEADOW VALLEY RANCHOS for me — 2½ acre parcel, $695 — payable $1 down, and $10 a month — no interest, no carrying charges. Send purchase contract and map showing exact location of my holding. You will return my deposit if I request same within 30 days. I enclose deposit for each 2½ acre rancho desired.

SIZE ACRES	DOWN	PER MO.
2½	$1	$10
5	2	15
7½	3	20
10	4	25

Name:_____

Address_____

City:_____ Zone:_____ State:_____

Indicate No. of Ranchos ____ Total enclosed $____

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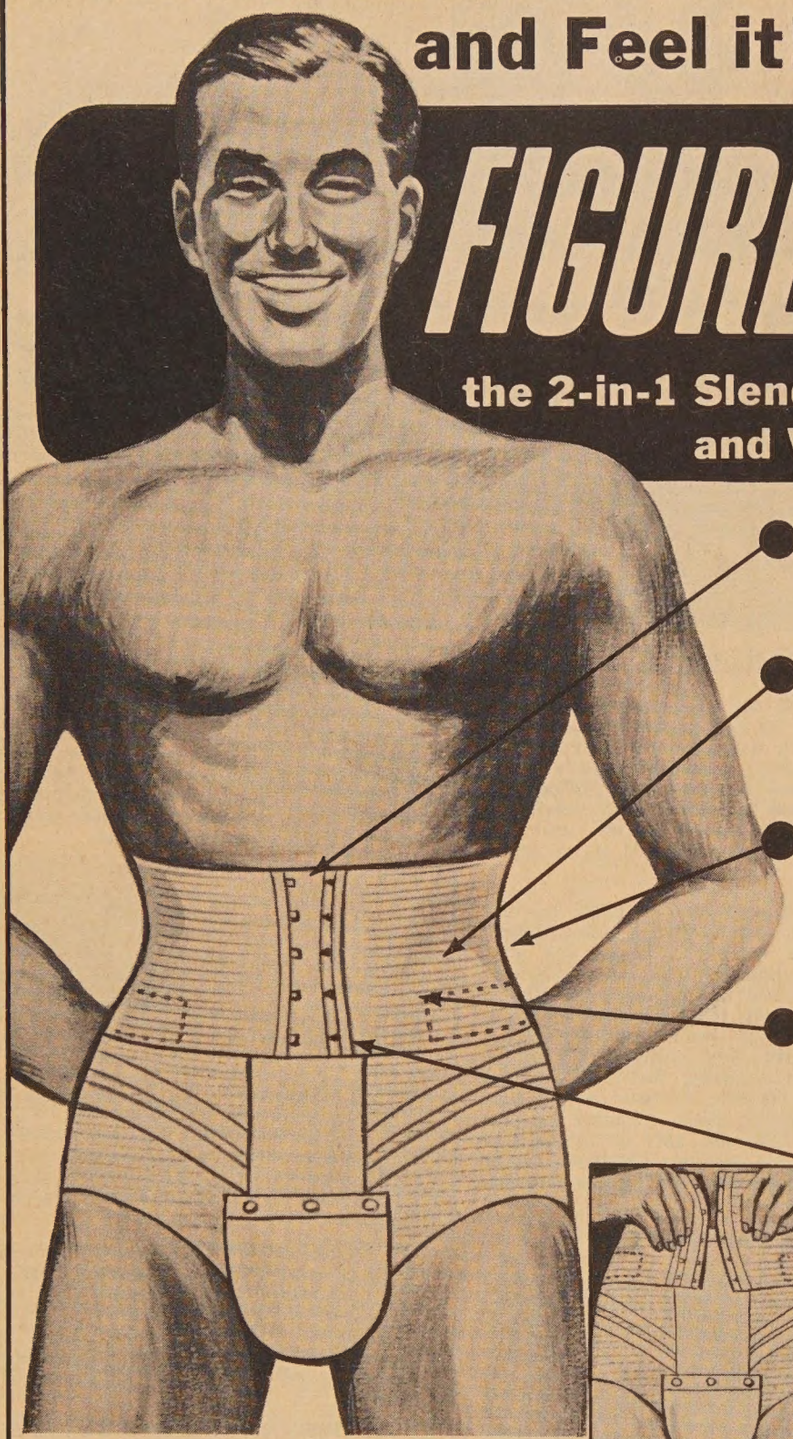
and Feel it! With all-new...

FIGURE SLIMMER

the 2-in-1 Slenderizer that Slims Abdomen and Waist at the SAME TIME!



Now reduce that waist and abdominal bulging look instantly. Figure Slimmer pushes back in the droopy bulging abdominal protuberance and lets you take in your waistline and do away with flabby midriff look instantly. Look at the picture and see how it works.

Slenderizes Both Abdomen and Waist

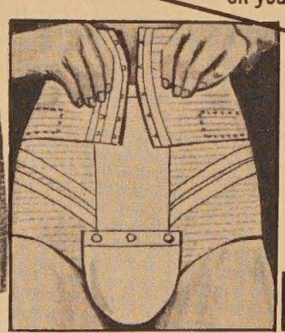
Figure-Slimmer corrects the faults of other garments. Some hold in the stomach but push out the waist. Figure Slimmer slenderizes both the waist and abdominal appearance at the same time. You will look inches slimmer and feel wonderful.

Holds Back Together

Figure Slimmer is wonderful for that falling-apart feeling. It's firm, gentle compressing action makes you feel good and secure and enables you to continue to do your daily work feeling less tired, less broken down. Send for Figure Slimmer now and begin enjoying a figure-slimmed appearance at once.

Appear Inches Slimmer—Look Better

Don't let a heavy weighing-down "corporation" and a balloon waistline get you down. Figure Slimmer flattens your front and takes in inches of your appearance. Clothes will look well on you now!



Adjustable

Figure Slimmer's adjustable feature makes it easy for you to have a small waistline look. Trousers now look good and fit swell. You can take yourself in more inches if you wish, with this novel adjustable feature.

Only $3.49 COMPLETE WITH CROTCH PIECE

WITHOUT FIGURE SLIMMER

Abdomen bulges out. Back sways down and in. Body slouches unnaturally, uncomfortably. Result? You look and feel as if you are falling apart.

WITH FIGURE SLIMMER

Abdomen is lifted up and in. You breathe easier, deeper. No more falling-apart feeling because back is braced. You look and feel slimmer — clothes fit better.

TRY 10 DAYS SEND NO MONEY

You need risk no money to try Figure Slimmer. Just fill out the coupon and we will rush you the Figure Slimmer by return mail. Wear it ten days. Then if you are not satisfied with the results you had expected return it and the full purchase price will be refunded. Mail coupon now. Only $3.49 for waist sizes up to 45. $3.98 for waist sizes 46 and up. All sizes include crotch piece.

MAIL COUPON TODAY

WARD GREEN COMPANY, Dept. FS-813
43 W. 61st St., New York, N.Y. 10023

Gentlemen:

Rush for ten days approval the new Figure Slimmer. After wearing for ten days I can return it for full refund of purchase price if not completely satisfied with results.

Check one:

☐ Send C.O.D. and I will pay postman plus postage.

☐ I enclose $3.49. Send it prepaid. ($3.98 for waist sizes 46 and up). EXTRA crotch pieces—50¢ ea.

My waist measure is_____inches

NAME_____

ADDRESS_____

CITY_____STATE_____ZIP CODE____

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TAPE RECORDER $6.70

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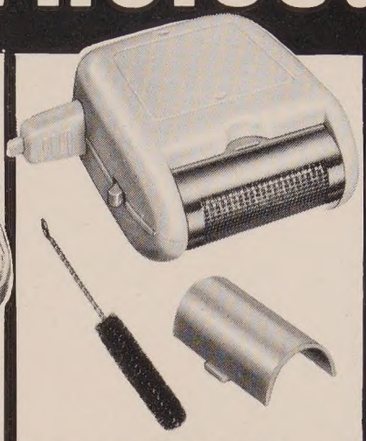

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"The Rangers mean law and order for Texas," Buck Duane's uncle tells him. "Kill a man and you're ruined. If you resist arrest, they'll shoot you. If you submit, you'll mebbe *hang!*"

But Buck *has* to kill Cal Bain. So he rides away toward the Rio Grande—to find refuge in that wild borderland country that is still untamed.

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